



Modules Offered AY2017/2018 Semester 2
(Listing updated as of 8 February 2018)

Module Descriptions: Please refer to OurCORS Module Information Listing below, and click on module code to view module descriptions.

<https://myaces.nus.edu.sg/ourcors/jsp/report/ModuleInfoListing.jsp>

Module Syllabus: The Module Syllabus is available on Canvas: <https://yale-nus.instructure.com/courses/1490>

Reminder on Class Dismissal Time: To facilitate smooth transition between classes and timely turnover of classrooms, instructors are to ensure their classes end 10 minutes before the scheduled end time.

Note: Any new updates to the Module Brief are highlighted in yellow or in red colour font.

Classes start on Monday, 15 January 2018.

For more information, please refer to Yale-NUS Academic Calendar at: <https://www.yale-nus.edu.sg/curriculum/academic-calendar/>

Transition Module

Module Code	Module Title	MC	Group Number & Instructors	Class Timetable (Days/Hours/Groups)	Remarks
YCT1201	Transitions – Understanding College and College Life	1	Chew Suyin Paul Gallagher Janelle Rahyns	Wed 0900 - 1030 (Groups S1, E1, C1) Wed 1100 - 1230 (Groups S2, E2, C2) Wed 1400 - 1530 (Groups S3, E3, C3)	Open to Freshmen only
YCT1202	Dialogue: Social Issues in Intergroup Relations	1	Paul Gallagher Janelle Rahyns	Tue 1430 - 1600 (Week 2, 3, 4, 5, and 6 only)	Open to Sophomores, Juniors and Seniors only

Common Curriculum

Module Code	Module Title	MC	Group Number & Instructors	Class Timetable (Days/Hours/Groups)
YCC1112	Literature and Humanities 2	5	Group 1: Geoff Baker Group 2: Robin Hemley Group 3: Gretchen Head Group 4: Jane Nardin Group 5: Kevin Goldstein Group 6: Laurel Fantauzzo Group 7: Kevin Goldstein Group 8: Geoff Baker Group 9: Andrew Hui Group 10: Gretchen Head Group 11: Maria Taroutina Group 12: Kevin Goldstein Group 13: Carissa Foo Group 14: Tony Day	Tue 0900 – 1000 (Lecture) 1030 – 1200 (Groups 1 to 6) 1430 – 1600 (Groups 8 to 14) 1630 – 1800 (Group 7) Fri 1030 – 1200 (Groups 1 to 6) 1430 – 1600 (Groups 8 to 14) 1630 – 1800 (Group 7)
YCC1114	Philosophy and Political Thought 2	5	Group 1: Andrew Bailey Group 2: Cathay Liu Group 3: Sandra Field Group 4: Tsin Yen Koh Group 5: Simon Duffy Group 6: Luke O’Sullivan Group 7: Paul Gallagher Group 8: Andrew Bailey Group 9: Amber Carpenter Group 10: Robin Zheng Group 11: Sandra Field Group 12: Christina Tarnopolsky Group 13: Tsin Yen Koh Group 14: Bryan van Norden	Mon 0900 – 1000 (Lecture) 1300 – 1430 (Groups 1 to 7) 1630 – 1800 (Groups 8 to 14) Thu 1300 – 1430 (Groups 1 to 7) 1630 – 1800 (Groups 8 to 14)
YCC1131	Scientific Inquiry 1	5	Group 1: William Piel Group 2: Nicholas Tolwinski Group 3: Jan Gruber Group 4: Neil Clarke Group 5: Philip Johns Group 6: Ajay Mathuru Group 7: Sebastian Pohl Group 8: William Piel Group 9: Jan Gruber Group 10: Neil Clarke Group 11: Philip Johns Group 12: Ajay Mathuru Group 13: Maurice Cheung	Mon 1100 – 1200 (Lecture) Tue 1300 – 1430 (Groups 1 to 7) 1630 – 1800 (Groups 8 to 14) Fri 1300 – 1430 (Groups 1 to 7) 1630 – 1800 (Groups 8 to 14)

Languages

S/N	Language Category	Major/Minor Affiliations	Module Code	Module Title	MC	Instructors	Class Timetable (Days/Hours)	Exam
1.	Italian		YIL1201H	Directed Language Study: Beginning Italian 1 (no longer offered in Semester 2, AY2017/2018)	5	Via Yale	Mon-Thu 1900–2030 Wed 1800–1900	-
2.	Portuguese		YIL1201P	Directed Language Study: Beginning Portuguese 1 (no longer offered in Semester 2, AY2017/2018)	5	Via Yale	Tue-Fri 1900–2030 Wed 1900–2000	-
3.	Russian		YIL1201R	Directed Language Study: Beginning Russian 1 (no longer offered in Semester 2, AY2017/2018)	5	Via Yale	Mon-Thu 2030–2200 Wed 2000–2100	-
4.	Sanskrit	Global Antiquity	YIL1201S	Directed Language Study: Beginning Sanskrit	5	Via Yale (Mark Holum)	Tue-Thu 1200 - 1330 Fri 0930 - 1030	-
5.	Italian		YIL2201H	Directed Language Study: Intermediate Italian 1 (no longer offered in Semester 2, AY2017/2018)	5	Via Yale	Tue-Fri 2030–2200 Wed 2100–2200	-
6.	Russian		YIL2201R	Directed Language Study: Intermediate Russian 1 (no longer offered in Semester 2, AY2017/2018)	5	Via Yale	Mon-Thu 1900–2030 Wed 1900–2000	-
7.	Sanskrit		YIL3201S	Directed Language Study: Advanced Sanskrit: The Mahabharata (no longer offered in Semester 2, AY2017/2018)	5	Via Yale	Mon-Thu 2030–2200 Wed 2100–2200	-
8.	Chinese		YLC1201	Beginning Chinese 1	5	Hu Jing	Group 1: Mon 1200 – 1300 Tue-Fri 1200 - 1300 Thu 1130 – 1230 Group 2: Mon-Thu 1430 – 1530 Tue-Fri 1300 - 1400	Sat, 28 April 2018 AM
9.	Chinese		YLC2201	Intermediate Chinese 1	5	Hu Jing	Mon-Tue-Thu-Fri 1030–1130 Tue-Fri 1030 - 1200 Thu 1030 - 1130	Sat, 28 April 2018 AM
10.	Chinese	Chinese Studies	YLC3203	Advanced Chinese 1	5	He Yingshu	Tue-Fri 1030 - 1200 Wed 1100–1200 Wed 0800 - 0900	Sat, 28 April 2018 AM
11.	Chinese	Literature Chinese Studies	YLC3205	Advanced Readings in Chinese: Cinematic and Literary Texts	5	Hu Jing	Mon-Thu 0830 - 1030	Sat, 28 April 2018 AM
12.	Greek		YLG1201	Beginning Ancient Greek	5	Eleftheria Lasthiotaki	Mon 1000 - 1100 Wed 0900 - 1030 Thu 1030 - 1200	Thu, 3 May 2018 AM
13.	Latin	Global Antiquity	YLL1201	Beginning Latin	5	Steven Green	Mon-Thu 1430 - 1600 Tue 1430 - 1530	Mon, 7 May 2018 PM
14.	Spanish		YLS1201	Beginning Spanish 1	5	Eduardo Lage-Otero	Tue-Fri 1030 - 1200 Wed 1100 - 1200	-
15.	Spanish		YLS1202	Beginning Spanish 2	5	Eduardo Lage-Otero	Tue-Fri 1430 - 1600 Wed 1300 - 1400	-
16.	Spanish		YLS2201	Intermediate Spanish 1	5	Amparo Espadas	Mon-Thu 0900 - 1030 Wed 0900 - 1000	-
17.	Spanish		YLS2202	Intermediate Spanish 2	5	Amparo Espadas	Mon-Thu 1300–1430 Wed 1000–1100 Tue 1300 - 1430 Wed 1000 - 1100 Thu 1430 - 1600	-

Humanities / Social Sciences / Sciences

S/N	Primary Major	Other Major/Minor Affiliations	Module Code	Module Title	MC	Instructors	Class Timetable (Days/Hours)	Exam
18.	Arts and Humanities		YHU1209	Introduction to the Arts	5	James Jack	Thu 1430 - 1730	Thu, 10 May 2018 PM
19.	Arts and Humanities		YHU2203	Masterpieces of Western Art: Renaissance to the Present	5	Maria Taroutina	Tue Fri 1030 - 1200	Tue, 8 May 2018 AM
20.	Philosophy	PPE	YHU2206	Introduction to Mathematical Logic	5	Cathay Liu	Mon Thu 1630 - 1800	Mon, 30 April 2018 AM
21.	Literature	Global Antiquity	YHU2211	Roman Literary Cultures	5	Mira Seo	Mon Thu 1300 - 1430	-
22.	Literature	Global Antiquity Chinese Studies	YHU2212	Classical Chinese	5	Scott Cook	Tue Fri 1600 - 1800	Wed, 2 May 2018 PM
23.	Arts and Humanities	Urban Studies	YHU2223	Documentary Photography	5	Tom White	Tue 1430-1830	-
24.	Arts and Humanities		YHU2248	Introduction to 2D Animation	5	Yanyun Chen	Wed 0900 - 1200	-
25.	Arts and Humanities		YHU2263	Living in Sound	5	Nirmali Fenn	Mon 1430 - 1730	-
26.	Arts and Humanities		YHU2278	Music Performance Elective: Introduction to Voice	2	Jassy Husk	Tue 1000 – 1200 (Group 1) Tue 1300 – 1500 (Group 2)	-
27.	Philosophy	PPE	YHU2279	Philosophy as a Way of Life	5	Matthew Walker	Tue Fri 1300 – 1430 Tue Fri 1630 - 1800	-
28.	Philosophy	PPE	YHU2280	Oppression and Injustice	5	Robin Zheng	Mon Thu 1300 - 1430	-
29.	Arts and Humanities	Anthropology	YHU2281	Art and Ethnography	5	Diana Chester	Wed 1230 - 1530	-
30.	Philosophy	PPE	YHU2282	Can Consciousness be Explained?	5	Neil Mehta	Tue Fri 1030 - 1200	-
31.	History		YHU2283	Europe and the Sea: The Making of a Continent	5	Rigo Mate	Tue Fri 1430 - 1600	Tue, 8 May 2018 PM
32.	Arts and Humanities	MCS	YHU2284	Programming for Time-based Art Forms (no longer offered in Semester 2, AY2017/2018)	5	Jon He	Tue Fri 1030 – 1230	-
33.	Arts and Humanities		YHU2285	Writing for the Voice	5	Nirmali Fenn	Thu 1430 - 1730	-
34.	Arts and Humanities		YHU2286	Daily Themes	5	Lawrence Ypil	Mon Thu 1430 - 1600	-
35.	Philosophy	PPE Chinese Studies	YHU2287	Neo-Confucianism and Chinese Buddhism	5	Bryan Van Norden	Mon Thu 1430 - 1600	Mon, 7 May 2018 PM
36.	Arts and Humanities		YHU3201	Drawing Process	5	Yanyun Chen	Mon 1430 - 1730	-
37.	Arts and Humanities	Anthropology	YHU3202	Permeable Boundaries: Music and Cultural Encounter	5	Sarah Weiss	Tue Fri 1030 - 1200	-
38.	History	Historical Immersion Chinese Studies	YHU3205	Ming Imperial Voyages	5	Claudine Ang	Tue Fri 0900 - 1030	-
39.	Literature		YHU3210C	Proseminar in Literary Studies	5	Andrew Hui	Wed 1230 - 1530	-
40.	Literature	Global Antiquity	YHU3211	Chinese Tales of the Strange	5	Scott Cook	Tue Fri 1300 - 1430	-

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		Chinese Studies						
41.	History	Historical Immersion Philosophy	YHU3221	Nietzsche: An Untimely Thinker and His Times	5	Taran Kang	Mon Thu 1030 - 1230	-
42.	History	Historical Immersion Global Antiquity	YHU3225	Pompeii: Art, Urban Life, and Culture in the Roman Empire	5	Emanuel Mayer	Tue Fri 1300 - 1430	-
43.	Historical Immersion	Global Antiquity	YHU3252	The Age of Nero	5	Steven Green	Mon Thu 1630 - 1800	-
44.	Historical Immersion		YHU3256	1887: Pasteur, Holmes, Yersin, Rizal	5	Tony Day	Tue Fri 1030 - 1200	-
45.	Arts and Humanities		YHU3273	Intermediate Oil Painting	5	Joshua Yang	Fri 1600 - 1900	-
46.	History	Global Affairs	YHU3278	Globalization in Southeast Asian History	5	Barbara Andaya	Mon Thu 0900 - 1030	-
47.	Literature		YHU3281	English Women Novelists: the Brontës to George Eliot	5	Jane Nardin	Wed Fri 0900 - 1030	-
48.	Historical Immersion	Literature	YHU3282	Equiano's Slave Narrative: Texts & Contexts	5	Nienke Boer	Mon Thu 1300 - 1430	-
49.	Philosophy	PPE	YHU3283	Fundamental Reality	5	Neil Mehta	Tue Fri 1430 - 1600	-
50.	History	Literature	YHU3285	Rebellion and Revolution in Vietnam	5	Claudine Ang	Tue Fri 1030 - 1200	-
51.	History		YHU4101	History Capstone Project	10	NA	NA	-
52.	Literature		YHU4102	Literature Capstone Project	10	NA	NA	-
53.	Philosophy		YHU4103	Philosophy Capstone Project	10	NA	NA	-
54.	Arts and Humanities		YHU4104	Arts and Humanities Capstone Project	10	Pattaratorn Chirapravati	Wed 1300 - 1500	-
55.	History		YHU4206	The History of History	5	Taran Kang	Thu 1300 - 1600	-
56.	Arts and Humanities		YHU4215	Advanced Fiction Writing	5	Robin Hemley	Fri 1430-1730	-
57.	Literature	Global Antiquity	YHU4227	Ancient Humour: Greece and Rome	5	Mira Seo	Mon Thu 1030 - 1200 Tue Fri 1430 - 1600	-
58.	Literature		YHU4228	Oceanic Frameworks: Shifting Currents in Lit. Studies	5	Nienke Boer	Mon Thu 0830 - 1030	-
59.	Philosophy	PPE	YHU4229	Plato on Knowing and Being Good	5	Amber Carpenter	Mon Thu 1030 - 1200 Tue Fri 0900 - 1030	-
60.	Arts and Humanities		YHU4230	The Politics of Dress in Pre-Modern Southeast Asia	5	Pattaratorn Chirapravati	Thu 1430 - 1730	-
61.	History	Economics	YHU4231	Ancient Economies of the Mediterranean and Western Asia	5	Emanuel Mayer	Tue Fri 1630 - 1800	-
62.	Arts and Humanities		YHU4232	Making performance, Generating Meaning	5	Lee Chee Keng	Tue 1430 - 1730	-
63.	Literature	Arts and Humanities	YHU4233	Violence, Poetry and the Arts	5	Rajeev Patke	Mon 1430-1730	-
64.	Environmental Studies		YID1201	Introduction to Environmental Studies	5	Marvin Montefrio	Tue Fri 1300 - 1430	-
65.	Environmental Studies	Life Sciences	YID2203	Ecology and Ecosystems	5	Michiel van Breugel	Tue Fri 0900 - 1030 Mon Thu 0900 - 1030	-

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66.	Environmental Studies		YID2207	Social Theory and the Environment	5	Marvin Montefrio	Tue Fri 1630 - 1800	-
67.	Environmental Studies	Literature	YID2208	Foundations of Environmental Humanities	5	Matthew Schneider-Mayerson	Mon Thu 1630 - 1800	Mon, 30 April 2018 AM
68.	Environmental Studies		YID3202D	Special Topics in Environmental Studies: Climate Change and the Future of Energy (6 weeks Intensive)	5	Daniel Esty	Mon Thu 1430 - 1600 (6 weeks Intensive)	-
69.	Environmental Studies		YID3212	Risk and Geohazard	5	Brian McADoo	Tue Fri 1430 - 1600	-
70.	Environmental Studies		YID4101	Environmental Studies Capstone Project	10	Marvin Montefrio	Wed 1300 - 1430	-
71.	Environmental Studies		YID4202	Applied Environmental Research	5	Matthew Schneider-Mayerson	Mon Thu 1300 - 1430	-
72.	Economics	PPE	YSS1203	Principles of Economics	5	Guillem Riambau	Wed Fri 0900 - 1030	Fri, 4 May 2018 AM
73.	Economics	PPE	YSS1205	Introduction to Game Theory	5	Francis Dennig	Tue Fri 1030-1200	Tue, 8 May 2018 AM
74.	PPE		YSS1206	Introduction to Comparative Politics	5	Parashar Kulkarni	Mon Thu 1430 - 1600	-
75.	Psychology		YSS2201	Understanding Behavior and Cognition	5	Jean Liu	Tue Fri 1230 - 1430 (Group 1) Tue Fri 1600 - 1800 (Group 2)	Wed, 2 May 2018 AM
76.	Global Affairs	PPE	YSS2202	International Relations	5	Markus Pauli	Tue Fri 1030 - 1200	-
77.	Economics	PPE	YSS2203	Intermediate Microeconomics	5	Benny Lam	Mon Thu 1300 - 1430 (Groups 1 & 2) Wed 1130 - 1230 (Group 1) Wed 1800 - 1900 (Group 2)	Thu, 3 May 2018 PM
78.	Psychology		YSS2207	Introduction to Social Psychology	5	Paul O'Keefe	Mon Thu 1300 - 1430 (Group 1) Mon Thu 1630 - 1800 (Group 2)	Thu, 3 May 2018 PM Sat, 28 April 2017 PM
79.	Anthropology		YSS2210	Contemporary Social Theory	5	Phil Gorski	Tue Fri 1430 - 1600	
80.	Economics	PPE Urban Studies	YSS2211	Econometrics	5	Eugene Choo	Tue Fri 1300 - 1430 (Groups 1 & 2) Wed 1030 - 1130 (Group 1) Fri 0830 - 0930 (Group 2)	Fri, 4 May 2018 PM
81.	Economics	PPE	YSS2214	Intermediate Macroeconomics	5	Yu-Hsiang Lei (Group 1) Liu Yibei (Group 2)	Tue Fri 1600 - 1730 (Groups 1 & 2) Tue 1730 - 1830 (Group 1) Tue 1830 - 1930 (Group 2)	Wed, 2 May 2018 PM
82.	Urban Studies	Anthropology	YSS2220	Introduction to Urban Studies	5	Cheng Yi'En, Shin Eun Jin, Valentina Zuin	Tue Fri 1030 - 1200	-
83.	Global Affairs	PPE	YSS2221	International Security	5	Kim Dong Jung	Tue Fri 1030 - 1200	Tue, 8 May 2018 AM

S/N	Primary Major	Other Major/Minor Affiliations	Module Code	Module Title	MC	Instructors	Class Timetable (Days/Hours)	Exam
84.	Global Affairs		YSS2224	Introduction to Global Affairs	5	Nancy Gleason	Tue 1430 - 1530 Fri 1430 - 1630	Tue, 8 May 2018 PM
85.	Anthropology		YSS2227	Introduction to Anthropology	5	Neena Mahadev	Mon Thu 1300 - 1430	-
86.	Anthropology	Global Affairs Urban Studies	YSS3202	Ethnography	5	Stuart Strange	Tue Fri 1300 - 1430	-
87.	Economics	PPE	YSS3204	Development Economics	5	Yu-Hsiang Lei	Tue Fri 1300-1430	Fri, 4 May 2018 PM
88.	Economics	PPE Global Affairs	YSS3205	International Trade (no longer offered in Semester 2, AY2017/2018)	5	Liu Yibei	Mon Thu 1300 - 1430	Thu, 3 May 2018 PM
89.	Economics	PPE	YSS3208	Advanced Microeconomics (no longer offered in Semester 2, AY2017/2018)	5	Benny Lam	Mon Thu 1630 - 1800	Mon, 30 April 2018 - AM
90.	PPE	Global Affairs Chinese Studies	YSS3212	Chinese Politics	5	Steven Oliver	Tue Fri 1030 - 1200	-
91.	Psychology		YSS3214	Abnormal Psychology	5	Keng Shian Ling	Tue 1430 - 1730	Tue, 8 May 2018 PM
92.	Urban Studies		YSS3222	Urban Theory	5	Nicholas Smith	Wed 0900 - 1200	
93.	Economics	Global Affairs PPE	YSS3224	International Finance	5	Liu Yibei	Mon Thu 0900 - 1030	Thu, 3 May 2018 AM
94.	Social Sciences	Anthropology Global Affairs PPE Urban Studies	YSS3231	Methods in the Social Sciences	5	Markus Pauli Cheng Yi'En	Wed 0900 - 1200	-
95.	Urban Studies		YSS3235	Urban Spatial Reasoning and Representation (no longer offered in Semester 2, AY2017/2018)	5	Aurel von Richthofen	Thu 1430 - 1730 Fri 1430 - 1730	-
96.	Anthropology		YSS3237	Gender Perspectives in Anthropology	5	Gabriele Koch	Thu 1430 - 1730	-
97.	Global Affairs	PPE	YSS3238	US Foreign Policy	5	Kim Dong Jung	Fri 1430 - 1730	-
98.	Urban Studies	Global Affairs PPE	YSS3246	Cities of the Global South	5	Valentina Zuin	Mon Thu 1300 - 1430	-
99.	Economics	PPE	YSS3248	Advanced Macroeconomics	5	Benny Lam	Tue Fri 1630 - 1800 Wed 0930 - 1030	Wed, 2 May 208 PM
100.	Global Affairs	Anthropology	YSS3254	Globalization on the Ground	5	Anju Paul	Mon Thu 1230 - 1430	-
101.	Urban Studies	Global Affairs PPE	YSS3262	Global Cities	5	Aditya Ranganath	Mon 1430 - 1730	-
102.	PPE	Philosophy Psychology	YSS3263	Emotions and Politics	5	Christina Tarnopolsky	Mon Wed 1030 - 1200	-
103.	Economics	PPE	YSS3264	Bubbles, Crashes, Panics and Crises	5	John Driffill	Mon Thu 1430 - 1600	Mon, 7 May 2018 PM
104.	Economics	PPE Urban Studies	YSS3265	Urban Economics	5	Xia Xing	Tue Fri 1430 - 1600	Tue, 8 May 2018 PM
105.	Psychology		YSS3266	Social and Behavioural Foundations of Health	5	Jeannette Ickovics	Tue Fri 1030 - 1200	-
106.	Psychology		YSS3267	Lab in Cognitive Psychology	5	Chris Asplund	Fri 1500 - 1800	-
107.	Anthropology	Chinese Studies	YSS3268	Anthropology of China	5	Zachary Howlett	Tue Fri 1630 - 1800	-
108.	Urban Studies		YSS3269	Water and Waste in Urban Environments	5	Valentina Zuin	Mon Thu 1030 - 1200	-
109.	Global Affairs	PPE	YSS3270	Ethics and Global Affairs	5	William Bain	Tue Fri 1300 - 1430	-
110.	PPE		YSS3271	Contemporary Political Comedy	5	Parashar Kulkarni	Mon Thu 1630 - 1800	-

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111.	Environmental Studies	Life Sciences/Urban Studies	YSS3272	Urban Ecological Systems	5	Stephen Pointing	Tue Fri 1030 - 1200	Tue, 8 May 2018 AM
112.	Global Affairs		YSS4101	Global Affairs Capstone Project	10	William Bain	Wed 1300 - 1430	-
113.	Psychology		YSS4102	Psychology Capstone Project	10	Not applicable	Wed Fri 1230 - 1430	-
114.	Anthropology		YSS4103	Anthropology Capstone Project	10	Marcia Inhorn	Wed 1230 - 1530 (odd weeks only)	-
115.	Economics		YSS4104	Economics Capstone Project	10	Not applicable	Wed 1400-1530	-
116.	Urban Studies		YSS4105	Urban Studies Capstone Project	10	No faculty to be allocated	Wed 1230 - 1530 (x 4 sessions only)	-
117.	PPE		YSS4106	Politics, Philosophy and Economics Capstone Project	10	Not applicable	Not applicable	-
118.	Law Liberal Arts		YSS4107	Capstone Project	10	Not applicable	Not applicable	-
119.	Psychology		YSS4202	Goals and Motivation (no longer offered in Semester 2, AY2017/2018)	5	Paul O'Keefe	Mon 1500 - 1800	-
120.	Global Affairs	Chinese Studies	YSS4205	Chinese Foreign Policy	5	Chin-Hao Huang	Mon 1430 - 1730	-
121.	Global Affairs	History PPE	YSS4211	India as a Rising Power, 1947-Present	5	Rohan Mukherjee	Tue 1430 - 1730	-
122.	Global Affairs	PPE	YSS4223	Politics of Identity in Developing Countries (no longer offered in Semester 2, AY2017/2018)	5	Risa Toha	Thu 0900 - 1200	-
123.	PPE		YSS4224	Political Order and One-Party Rule	5	Steven Oliver	Wed 0900 - 1200	-
124.	PPE	Philosophy	YSS4225	Contemporary Continental Political Thought	5	Ben Schupmann	Tue Fri 0900 - 1030	-
125.	Global Affairs		YSS4226	Migration Policy	5	Anju Paul	Mon Thu 0830 - 1030	-
126.	Economics	PPE	YSS4227	Topics in Applied Econometrics (no longer offered in Semester 2, AY2017/2018)	5	Eugene Choo	Tue Fri 0900 - 1030	Fri, 4 May 2018 AM
127.	Anthropology		YSS4228	The Anthropology of Dreams and Sleep	5	Stuart Strange	Tue Fri 0900 - 1030	-
128.	Anthropology	Global Affairs	YSS4229	The Anthropology of Human Rights	5	Gabriele Koch	Mon Thu 1030 - 1200	-
129.	Psychology		YSS4230	Psychology of Mindfulness	5	Keng Shian Ling	Thu 1430 - 1730	-
130.	Psychology		YSS4231	Parenting and Child Development	5	Cheung Hoi Shan	Mon Thu 0900 - 1030	Thu, 3 May 2018 AM
131.	PPE		YSS4232	Advanced Topics in PPE: The Welfare State	5	Ben Schupmann	Tue Fri 1430 - 1600	-
132.	PPE	Global Affairs	YSS4233	Populism and Democracy	5	Philip Gorski	Mon Thu 1300 - 1430	Thu, 10 May 2018 AM
133.	Urban Studies	History	YSS4234	Urban Heritage: Place, Memory, Identity	5	Creighton Connolly	Tue Fri 0900 - 1030	-
134.	Anthropology	Global Affairs	YSS4235	Religion and the Media Turn	5	Neena Mahadev	Wed 0900 - 1200	-
135.	Anthropology	Global Affairs	YSS4236	Medical Anthropology: The Canon	5	Marcia Inhorn	Tue Fri 1030 - 1200	-
136.	Global Affairs		YSS4237	Conquest, Territorial Expansion and International Law (no longer offered in Semester 2, AY2017/2018)	5	Catherine Sanger	Tue Fri 0900 - 1030	-
137.	Global Affairs	PPE	YSS4238	Micro-Finance and Sustainable Development in Asia	5	Markus Pauli	Tue Fri 1430 - 1600	-

S/N	Primary Major	Other Major/Minor Affiliations	Module Code	Module Title	MC	Instructors	Class Timetable (Days/Hours)	Exam
138.	MCS but does not count towards the major		YSC1206	Conceptual Calculus	2	Francesca Spagnuolo	Mon 1300 - 1430	Thu, 3 May 2018 PM
139.	Physical Sciences		YSC1207	General Chemistry: Molecular Structure and Reactivity	5	Genevieve Lau	Mon Thu 1300 - 1430 Mon 1430 - 1730 (Lab) Wed 0900-1200 (Lab)	Mon, 30 April 2018 PM
140.	MCS		YSC1212	Introduction to Computer Science	5	Aquinas Hobor	Mon Thu 1430 - 1600	-
141.	MCS but does not count towards the major		YSC1214	Networks	2	Maurice Cheung	Tue Fri 1030 - 1200 (Weeks 8 to 13 only)	-
142.	Life Science but does not count towards the major		YSC1215	Genetic Engineering for All: An iGEM team for Yale-NUS?	2	Adeline Lin	Wed 1300-1430	-
143.	Life Sciences		YSC2202	Biology Laboratory	5	Jan Gruber	Tue Fri 0830 - 1230	-
144.	Physical Sciences		YSC2203	Classical Mechanics	5	Shaffique Adam	Tue Fri 1430 - 1530 Tue Fri 1500 - 1600 Thu 0930 - 1030	Thu, 3 May 2018 AM
145.	MCS but does not count towards the major	Physical Sciences	YSC2205	Mathematical Methods for Physical Scientists (Note: Please note that YSC2205 Mathematical Methods for Physical Scientists has been retitled to "YSC3240 Foundations of Applied Mathematics" in Round Three)	5	Florin Diacu	Tue Fri 1300 - 1430	Fri, 4 May 2018 PM
146.	MCS		YSC2209	Proof	5	David Smith	Mon Thu 1230-1430 (Group 1) Mon Thu 1600-1800 (Group 2)	-
147.	MCS		YSC2210	Data Analysis and Visualization (DAVis) with R	5	Michael Gastner	Mon Thu 1600 - 1800 (Group 1) Mon Thu 1030 - 1230 (Group 2)	Mon, 30 April 2018 AM Sat, 5 May 2018 AM
148.	Physical Sciences		YSC2212	Instrumental Analysis with Laboratory	5	Stanislav Presolski	Tue Fri 1030 - 1200 Thu 1300 - 1700 (Lab) Tue 1300 - 1600 (Lab) Mon Thu 1030 - 1200	-
149.	MCS		YSC2213	Discrete Mathematics	5	Matthew Stamps	Mon Thu 1230 - 1430	Mon, 30 April 2018 PM
150.	MCS		YSC2215	Non-linearity	2	Jon Berrick	Tue Fri 0900 - 1030 (2nd Half Semester, Weeks 8 to 13)	-
151.	Physical Sciences		YSC2218	Survey of High Energy Physics Experiments	5	Richard Breedon	Mon Thu 1430 - 1600 Wed 1430 - 1530	-
152.	MCS		YSC2220	Linearity	2	Jon Berrick	Tue Fri 0900 - 1030 (1st Half Semester, Weeks 1 to 6)	-
153.	MCS		YSC2221	Introduction to Python	2	Alan Cheng (Group 1) Simon Perrault (Groups 2 & 3)	Tue 0900 - 1030 Fri 1300 - 1430 (Group 1 - first half semester) Mon Thu 1030 - 1200 (Group 2 - first half semester)	-

S/N	Primary Major	Other Major/Minor Affiliations	Module Code	Module Title	MC	Instructors	Class Timetable (Days/Hours)	Exam
							Mon Thu 1430 - 1600 (Group 3 - second half semester)	
154.	Physical Sciences		YSC2228	Statistical Thermodynamics	5	Kang Hway Chuan	Tue Fri 1630 - 1800 Wed 1300 - 1400	Wed, 9 May 2018 PM
155.	MCS		YSC2229	Introductory Data Structures and Algorithms	5	Olivier Danvy	Tue Fri 1630 - 1800	Fri, 11 May 2018 PM
156.	MCS		YSC2230	Probability and Statistics	5	Tim Wertz	Tue Fri 1030-1230	-
157.	MCS		YSC3203	Advanced Algorithms and Data Structures	5	Robby Tan	Mon Thu 1430 - 1600	Thu, 10 May 2018 PM
158.	MCS	Physical Sciences	YSC3205	Linear Algebra	5	Tim Wertz	Tue Fri 1430 - 1600 Wed 1330 - 1430	Tue, 8 May 2018 PM
159.	MCS		YSC3208	Programming Language Design and Implementation	5	Olivier Danvy	Tue Fri 1430 - 1600	Tue, 8 May 2018 PM
160.	Physical Sciences		YSC3213	Experimental Physics Laboratory	5	Andrew Bettiol	Wed 0900 - 1300 (lab) Thu 1030 - 1230 (lab)	
161.	Life Sciences	Physical Sciences	YSC3214	Biochemistry	5	Maurice Cheung	Tue Fri 1300 - 1430 Mon 1300 - 1400	Mon, 30 April 2018 PM
162.	MCS		YSC3216	Stochastic Processes and Models (SPaM) (no longer offered in Semester 2, AY2017/2018)	5	Michael Gastner	Mon Thu 1230 - 1430	Mon, 30 April 2018 PM
163.	MCS		YSC3221	Computer Vision and Deep Learning	5	Robby Tan	Mon Thu 1030 - 1200	Mon, 7 May 2018 AM
164.	Life Sciences	Global Affairs	YSC3222	Tobacco: A Social Policy Perspective	5	Jon Berrick	Mon Thu 1300 - 1430	-
165.	MCS		YSC3226	Designing Interactive Systems	5	Simon Perrault	Mon Thu 1300 - 1430	-
166.	Physical Sciences		YSC3228	Inorganic Chemistry with Laboratory (no longer offered in Semester 2, AY2017/2018)	5	Chan Kiat Hwa	Tue Fri 0900-1030 (Lab) Tue 1300 - 1430	-
167.	Life Sciences		YSC3238	Developmental Biology	5	Antonia Monterio	Mon Thu 1430-1600	-
168.	MCS	Historical Immersion	YSC3239	Geometry and the Emergence of Perspective	5	Matthew Stamps	Mon 1030 - 1130 Mon 0930-1030 Wed 0900 - 1200	-
169.	MCS but not count towards the major	Physical Sciences	YSC3240	Foundations of Applied Mathematics	5	Florin Diaeu Francesca Spagnuolo	Tue Fri 1300 - 1430	Fri, 4 May 2018 PM
170.	Physical Sciences		YSC4101	Physical Sciences Capstone Project	10	NA	NA	-
171.	Life Sciences		YSC4102	Life Sciences Capstone Project	10	NA	NA	-
172.	MCS		YSC4103	Maths, Computational & Statistical Sci Capstone Project	10	David Smith	Wed 1430 - 1530	-
173.	Physical Sciences		YSC4205	Organometallic Chemistry	5	Chan Kiat Hwa	Mon Thu 1430 - 1630	-
174.	MCS	Physical Science	YSC4210	Complex Analysis	5	Florin Diaeu Chan Heng Huat	Tue Fri 0830-1030 Tue Fri 1830 - 2030	Fri, 4 May 2018 AM
175.	Life Sciences		YSC4211	Advanced Topics in Molecular, Cellular & Developmental Biology	5	Nicholas Tolwinski	Wed 1300 - 1600	-

Independent Study Modules

S/N	Primary Major	Other Major Affiliations	Module Code	Module Title	MC	Instructors	Class Timetable	Exam
176.	Not applicable	Not applicable	YIR3311 YIR3312 YIR3313	Independent Reading and Research	2	Not applicable	Not applicable	Not applicable

			YIR3311G YIR3312G YIR3313G					
177.	Not applicable	Not applicable	YSC4200 YSC4200G	Special Project in Science	5	Not applicable	Not applicable	Not applicable
178.	Not applicable	Not applicable	YIR3411 YIR3412 YIR3411G YIR3412G	Independent Language Study and Research	2	Not applicable	Not applicable	Not applicable

Transition Module

YCT1201 Transitions – Understanding College and College Life

Pre-requisite(s): None

Instructors: Chew Suyin, Paul Gallagher, Janelle Rahyns

Transitions is a six-week optional elective module that supports all Yale-NUS first year students in their transition to college. Topics covered include goal setting, time management, maintaining wellness, understanding learning styles, study tips and effective note-taking, formal and informal communication, and understanding academic regulations. Students are expected to further their learning by meeting up with their Deans Fellows outside of class time.

YCT1202 Dialogue: Social Issues in Intergroup Relations

Pre-requisite(s): None

Instructors: Paul Gallagher, Janelle Rahyns

In a culturally and socially diverse society, discussion about issues of difference, conflict and community are needed to facilitate understanding between social/cultural groups. In this intergroup dialogue, students will actively participate in semi-structured, face-to-face meetings with students from other social identity groups. Students will learn from each other's' perspectives, read and discuss relevant reading material, and explore their own and other groups' experiences in various social and institutional contexts. Students will also explore ways of taking action to create change and bridge differences at the interpersonal and social/community levels.

Common Curriculum

YCC1112 Literature and Humanities 2

Pre-requisite(s): YCC1111 Literature and Humanities 1; or permission of the instructor.

This is the second semester of a two semester sequence on literature and humanities. The sequence explores literature and other arts from cultures around the world throughout history. Special attention is paid to developing skills in written and oral expression.

YCC1114 Philosophy and Political Thought 2

Pre-requisite(s): YCC1113 Philosophy and Political Thought 1; or permission of the instructor.

This is the second module of a two semester sequence exploring philosophy and political thought. Texts and ideas from many times and many cultures around the world will be explored. Special attention is given to developing skills of oral and written expression.

YCC1131 Scientific Inquiry 1

Pre-requisite(s): None

Scientific Inquiry exposes students to a series of topics across the sciences designed to develop understanding of the process of science. The module is designed for students of all backgrounds, and addresses questions of what is and is not science, and how scientific theories are created and developed.

Languages

Note: Directed Language Study Modules (via Yale): If you are interested in taking a directed language module via Yale (e.g. Italian, Portuguese, Russian, or Sanskrit), please email our Language Coordinator, Dr Eduardo Lage-Otero <eduardo.lageotero@yale-nus.edu.sg> so that he may look into this possibility and advise you. At this point, such Directed Language Study modules are not available for selection within OurCORS.

~~YIL1201 Directed Language Study: Beginning Italian 1 (no longer offered in Semester 2, AY2017/2018)~~

~~Instructor: Via Yale~~

~~**Pre-requisite(s):** None~~

~~Beginning Italian 1 is designed to help students develop a basic ability to read, write, understand, and speak Italian as well as to expand their cultural competency. Since all linguistic skills cannot be fully developed in one semester alone, stress will be placed on the acquisition of basic structures, which will be developed and reinforced in subsequent modules. The course will be conducted in Italian via teleconference from Yale.~~

~~YIL1201P Directed Language Study: Beginning Portuguese 1 (no longer offered in Semester 2, AY2017/2018)~~

~~Instructor: Via Yale~~

~~**Pre-requisite(s):** None~~

~~Beginning Portuguese 1 is designed to help students develop a basic ability to read, write, understand, and speak Portuguese as well as to expand their cultural competency. Since all linguistic skills cannot be fully developed in one semester alone, stress will be placed on the acquisition of basic structures, which will be developed and reinforced in subsequent modules. The course will be conducted in Portuguese via teleconference from Yale.~~

~~YIL1201R Directed Language Study: Beginning Russian 1 (no longer offered in Semester 2, AY2017/2018)~~

Instructor: Via Yale

Pre-requisite(s): None

Beginning Russian 1 is designed to help students develop a basic ability to read, write, understand, and speak Russian as well as to expand their cultural competency. Since all linguistic skills cannot be fully developed in one semester alone, stress will be placed on the acquisition of basic structures, which will be developed and reinforced in subsequent modules. The course will be conducted in Russian via teleconference from Yale.

YIL1201S Directed Language Study: Beginning Sanskrit

Instructor: Via Yale (Mark Holum)

Pre-requisite(s): None

Preclusion: YLN1201 Beginning Sanskrit 1; or permission of the instructor.

This course offers four hours a week of language instruction in Sanskrit for beginners. Instruction will cover the writing systems, vocabulary, and syntax of classical Sanskrit texts. Students will achieve a basic reading level by the end of the semester. The course will be taught via teleconference.

YIL2201 Directed Language Study: Intermediate Italian 1 (no longer offered in Semester 2, AY2017/2018)

Instructor: Via Yale

Pre-requisite(s): ~~YIL1202 Directed Language Study: Beginning Italian 2 or equivalent. Students may need to take a placement exam; or permission of the instructor.~~

~~Intermediate Italian 1 is designed to increase students' proficiency in reading, writing, speaking, and overall comprehension of the language. This module is aimed at students who have completed the beginning sequence or have had significant experience with the language. It offers a combination of listening and speaking practice with a review of key concepts of Italian grammar via targeted reading and writing activities. This module continues to incorporate cultural elements through representative readings and films. The course will be conducted in Italian via teleconference from Yale.~~

YIL2201R Directed Language Study: Intermediate Russian 1 (no longer offered in Semester 2, AY2017/2018)

Instructor: Via Yale

Pre-requisite(s): ~~YIL1202R Directed Language Study: Beginning Russian 2 or equivalent; or permission of the instructor. Students may need to take a placement exam.~~

~~Intermediate Russian 1 is designed to increase students' proficiency in reading, writing, speaking, and overall comprehension of the language. This module is aimed at students who have completed the beginning sequence or have had significant experience with the language. It offers a combination of listening and speaking practice with a review of key concepts of Russian grammar via targeted reading and writing activities. This module continues to incorporate cultural elements through representative readings and films. The course will be conducted in Russian via teleconference from Yale.~~

YIL3201S Directed Language Study: Advanced Sanskrit: The Mahabharata (no longer offered in Semester 2, AY2017/2018)

Instructor: Via Yale

Pre-requisite(s): ~~YIL2201S Directed Language Study: Intermediate Sanskrit or equivalent; or permission of the instructor. Students may need to take a placement exam.~~

~~The goal of this course is to give students the ability to read literary texts in classical Sanskrit. Taught via teleconference, this course will focus on a selection of the great Indian Epic, the *Mahabharata*. The *Mahabharata* is the story of a world ending war between two royal houses and is probably the single most important literary work in India. Using skills developed in the basic and intermediate levels of the language, students will translate and discuss the relevant sections throughout the semester. This course will also discuss a number of advanced and rare grammatical forms in Sanskrit.~~

YLC1201 Beginning Chinese 1

Instructor: Hu Jing

Pre-requisite(s): None

A Beginning Chinese course in listening, speaking, reading, and writing in Modern Standard Chinese. The student will learn pinyin, basic grammar, and a limited set of characters to understand basic everyday conversations and elementary readings. The course is designed for the absolute beginners and intended primarily for non-heritage students with no previous exposure to Chinese.

YLC2201 Intermediate Chinese 1

Instructor: Hu Jing

Pre-requisite(s): YLC1201 Beginning Chinese 1 and YLC1202 Beginning Chinese 2 or equivalent Chinese proficiency; or permission of the instructor.

This course is designed for students who completed First year Chinese (two semesters: YLC 1201 & 1202) or have equivalent Chinese proficiency. It emphasizes on the ability to communicate and function accurately and appropriately in Modern Chinese. Students will take a placement test prior to the beginning of the course. The course aims to provide students with continuous development of the basic language skills by: (1) acquiring basic knowledge and communicative skills in speaking, listening, reading, and writing Chinese; (2) gaining solid understanding of the cultural and social context of Chinese; (3) developing research skill to understand Chinese texts and culture by using Chinese input system and online dictionary, as well as useful online resources.

YLC3203 Advanced Chinese 1

Instructor: He Yingshu

Pre-requisite(s): YLC2202 Intermediate Chinese 2 or equivalent; or permission of the instructor.

This course, together with *Advanced Chinese 2*, bridges the gap between our current offerings of intermediate and advanced-level Chinese, serving students who have completed YLC 2202 Intermediate Chinese 2 or equivalent. It continues to develop students' abilities in speaking, orally comprehending, reading, and writing modern Mandarin Chinese and, concomitantly, also serves to deepen students' understanding of the social and cultural issues facing China today. Students will be routinely drilled in reading and writing throughout the semester. Systematic discussion, debate, and presentation provide students with ample opportunities to practice and enhance their newly acquired linguistic skills and oral fluency. Class instruction and discussion will be conducted only in Chinese.

YLC3205 Advanced Readings in Chinese: Cinematic and Literary Texts

Instructor: Hu Jing

Pre-requisite(s): YLC3204 Advanced Chinese 2 or equivalent or permission of the instructor.

Preclusion(s): Students who took the old YLC3201 Advanced Chinese: Cinematic and Literary Texts in AY2016-17 cannot take this course.

This course is designed to help students develop critical reading and writing skills through the use of contemporary Chinese cinema and film-related literary works. Students will also have the opportunity to compare and contrast Chinese films with the literature from which they are adapted. These activities, which include speaking, listening, writing, and reading, will provide a rich experience that goes beyond traditional language learning. Class instruction and discussion, conducted only in Chinese, will challenge students to form their own opinions of characters and themes, with less of a focus on grammar.

YLG1201 Beginning Ancient Greek

Instructor: Eleftheria Lasthiotaki

Preclusion(s): YLG2201 Intensive Elementary Greek; or permission of the instructor.

This is an introductory course of language instruction in ancient Attic Greek for beginners, designed to give students a decent reading level by the end of the semester. It offers four days a week instruction. As well as gaining an introductory familiarity with the syntax and vocabulary of ancient Greek texts, students will develop an associated cultural knowledge in ancient Greek society and literary/ dramatic production.

YLL1201 Beginning Latin

Instructor: Steven Green

Pre-requisite(s): None

This course offers four contact hours a week of language instruction in Latin for beginners. Instruction will cover the writing systems, vocabulary, and syntax of ancient Roman texts. Students will develop linguistic and cultural knowledge in ancient Mediterranean antiquity, and achieve a basic reading level by the end of the semester.

YLS1201 Beginning Spanish 1

Instructor: Eduardo Lage-Otero

Pre-requisite(s): None

Beginning Spanish 1 is the introductory module to the language and culture of the Hispanic world. This course is designed to help you develop a basic ability to read, write, understand, and speak Spanish as well as to expand students' cultural competency. Since all linguistic skills cannot be fully developed in Beginning Spanish 1 alone, stress will be placed on the acquisition of basic structures, which will be developed and reinforced in subsequent modules.

YLS1202 Beginning Spanish 2

Instructor: Eduardo Lage-Otero

Pre-requisite(s): YLS1201 Beginning Spanish 1; or permission of the instructor.

This module is a continuation of Beginning Spanish 1. Beginning Spanish 2 pays close attention to aural/oral practice while strengthening basic grammar skills, writing, and reading comprehension. The module covers the second half of the eBook used in Beginning Spanish 1 and prepares students for Study Abroad opportunities via CIPE in their second summer at Yale-NUS or beyond.

YLS2201 Intermediate Spanish 1

Instructor: Amparo Espadas

Pre-requisite(s): YLS1202 Beginning Spanish 2; or permission of the instructor.

This module targets students who have completed the Beginning Spanish sequence or have had significant experience with the language (e.g., Study Abroad during their first summer at Yale-NUS or studied Spanish in high school). It offers a combination of listening and speaking practice with a review of key concepts of Spanish grammar via targeted reading and writing activities. This module continues to incorporate Hispanic cultural elements through representative texts and audiovisual materials from the Spanish-speaking world.

YLS2202 Intermediate Spanish 2

Instructor: Amparo Espadas

Pre-requisite(s): YLS2201 Intermediate Spanish 1; or permission of the instructor.

This module is a continuation of Intermediate Spanish 1. Students taking this module will build upon what was covered in the first half and continue to expand their command of written and spoken Spanish. Spanish 2 pays close attention to aural/oral practice while strengthening more complex grammar skills (e.g., the subjunctive, passive voice), writing, and reading comprehension. The module covers the second half of the eBook used in Intermediate Spanish 1 (*Más*) and prepares students for Study Abroad opportunities via CIPE at Yale-NUS and NUS.

Humanities / Social Sciences / Sciences

YHU1209 Introduction to the Arts

Instructor: James Jack

Pre-requisite(s): None

Students in the Art and Humanities major must take *Introduction to the Arts*.

The course will give students the opportunity to engage with arts practice in several different media (e.g. drawing, painting, sculpture, sound, video, photography, writings and new media etc.) while digging into big questions about art and artistic expression: How can we think about art today? What can artists do in the world? What are the distinctions between forms of art? How does art relate to place? Each year the works taught will be taught thematically. In AY2017-18 the theme is "Art as a Collaborative and Social Medium".

YHU2203 Masterpieces of Western Art: Renaissance to the Present

Instructor: Maria Taroutina

Pre-requisite(s): None

This course will examine a number of artistic masterpieces from the Western tradition, ranging from medieval Byzantine icons to contemporary installation art. We will delve deeply into each of the selected artworks, simultaneously examining their extraordinary uniqueness and their capacity to represent an entire cultural epoch,

both aesthetically and conceptually. Along the way we will ask what makes these works “masterpieces” and debate how and why they came to form the Western artistic “canon.”

YHU2206 Introduction to Mathematical Logic

Instructor: Cathay Liu

Pre-requisite(s): None

This is a first course in formal logic. Formal logic has had a tremendous success and influence since it was developed in its present form. It is the inspiration for many artificial languages, including programming languages, and it has been successfully used in mathematics. Formal logic is also very important in the study of natural languages and in the analysis of valid or invalid forms of argument and reasoning. We will cover a fairly substantial introduction to these issues.

YHU2211 Roman Literary Cultures

Instructor: Mira Seo

Pre-requisite(s): YCC1111 Literature and Humanities 1 and YCC1112 Literature and Humanities 2; or permission of the instructor.

When and how did Roman authors develop the literary culture that became as dominant as their imperial power? How did Romans distinguish their own literary production from the Greek models that influenced them so greatly? This survey of Roman literary culture from the earliest inscriptional evidence through subversive erotic poetry and martial epic examines the growth and afterlife of one of the world’s most influential literary traditions. We will explore the changing political and cultural contexts of exemplary works from Rome’s long history, and these works’ impact on subsequent art and literature.

YHU2212 Classical Chinese

Instructor: Scott Cook

Pre-requisite(s): YLC2202 Intermediate Chinese 2 or native equivalent; or permission of the instructor.

This course will introduce students to the basic particles and grammatical structure of the classical Chinese language (a.k.a. literary Chinese). Through the close reading of texts from the pre- and early-imperial periods, students will also learn such skills as recognizing syntactic parallelism, the art of reading in context, and understanding rhetorical structures.

YHU2223 Documentary Photography

Instructor: Tom White

Pre-requisite(s): None

Photography is becoming increasingly important in our interconnected world. The question needs to be asked has the exponential increase in images resulted in a corresponding increase in knowledge or visually literacy? This course will explore the use of photography as a socially conscious art form, representing, reflecting and commenting on society and our place in the world.

Learning from the work of photographers of singular importance within the Documentary genre as well as those pushing the boundaries of the medium, students will work towards creating a body of work that tells a story through narrative, emotion, style and substance.

YHU2248 Introduction to 2D Animation

Instructor: Yanyun Chen

Pre-requisite(s): None

This course will introduce students to 2D Animation as part of the arts and humanities major *Practice* category. Students will work with the methods, materials and techniques of 2D animation. Through studio sessions, workshops and talks they will be introduced to the key aspects of 2D Animation and paper cut animation, and become familiar with the techniques and themes involved.

YHU2263 Living in Sound

Instructor: Nirmali Fenn

Pre-requisite(s): None

Our ears have the capacity to distinguish the density of substances, volumes of space and the distances between objects. This course seeks to recover the dynamic, multisensorial phenomenon of music and to redirect thinking about sound as object in order to reconceptualise sound as an event that occurs through the practice of vibration.

Approaching music as a vibrational practice offers the opportunity to examine listening practices around sound. This course attempts to awaken deep listening practices of built and natural environments, which students will then present in a public sound exhibition. No prior knowledge of music is required.

YHU2278 Music Performance Elective: Introduction to Voice

Instructor: Jassy Husk

Pre-requisite(s): None

This is a practical course focusing on vocal literature from its various styles and traditions. Students will work one-on-one with the lecturer, honing in on solo, chamber and choir repertoires. Lectures will consider the historical and social aspects that define the nature of their songs and also focus on the various languages and language syntax of their chosen songs.

YHU2279 Philosophy as a Way of Life

Instructor: Matthew Walker

Pre-requisite(s): YCC1114 Philosophy and Political Thought 2; or permission of the instructor.

In the contemporary world, philosophy is one academic discipline among many. But throughout its history, philosophy has also been conceived as a way of life. This course will explore this alternative conception of philosophy by exploring pre-modern Greco-Roman and Chinese models, and contemporary reflections on the philosophical life. Topics include the relation between theoretical discourse and one’s lived life; philosophy and living well; philosophy as a way of life and “religion”; proreptic arguments for pursuing philosophy; therapeutic arguments; spiritual exercises; and the extent to which this conception of philosophy remains viable today.

YHU2280 Oppression and Injustice

Instructor: Robin Zheng

Pre-requisite(s): None

How should we recognize, understand, and overcome injustices in the world? Philosophers and activists across many times and places have contemplated and confronted this question with respect to such issues as slavery, colonialism, imperialism, racism, sexism, homophobia, xenophobia, ableism, and economic exploitation. This course focuses on the moral and political thought of and in solidarity with oppressed groups, that is, on philosophy born of struggle and aimed at emancipation.

YHU2281 Art and Ethnography

Instructor: Diana Chester

Pre-requisite(s): None

This course will explore the arena of Ethnographic research with a specific focus on digital ethnography, and will combine an exploration in ethnographic research with artistic practice. Students will learn a variety of ethnographic methods and execute a mini research project in which they spend time within a community documenting the community through traditional written methods, as well as digital documentation (photography, audio recording, video recording etc). This course will grapple with art as a tool for preservation and sustainability of cultural heritage. Students explore ethnography through the written word as well as a multi-media form of expression

YHU2282 Can Consciousness be Explained?

Instructor: Neil Mehta

Pre-requisite(s): None

To have a conscious experience is to enjoy a technicolor, surround-sound blast that seems to resist full scientific explanation. In this course we consider whether it is possible to explain consciousness at all, and if so, how.

YHU2283 Europe and the Sea: The Making of a Continent

Instructor: Rigo Mate

Pre-requisite(s): Successful completion of the first semester of CC modules in year 1; or with the permission of the instructor.

Europe and the Sea: The Making of a Continent" is a 2000-level survey course with a concentration on the early modern and modern history of the continent. This course offers a survey of European history through a focus on European encounters with the sea. The course examines how the Mediterranean and Nordic seas as well as the Atlantic Ocean, broadened the geographical boundaries of Europe, connecting it with other continents. The course is divided into three interrelated parts. First, we will investigate how Mediterranean commercial ties created connections among various parts of Europe in the early modern period, and how the rise of capitalism was predicated upon colonial expansion towards other continents. The second part of the course builds on the theme of capitalism, colonialism, and conquest to explore how trade in the Atlantic and the Mediterranean promoted the rise of Europe's emerging bourgeoisie in the 19th century. The last part of the course explores how the sea impacted Europeans during the two World Wars and the Cold War, and why it is crucial during the current refugee crisis.

~~YHU2284 Programming for Time-based Art Forms (no longer offered in Semester 2, AY2017/2018)~~

Instructor: Jon He

Pre-requisite(s): ~~YHU2257 Introduction to Music Technology; or with the permission of the instructor.~~

~~This course provides an introduction to computer music programming for manipulating sound, composing music, and performance. Programming concepts will be presented using practical examples in the form of compositions and digital musical instruments. At the end of the course, each student will create an interactive/generative computer music composition.~~

YHU2285 Writing for the Voice

Instructor: Nirmali Fenn

Pre-requisite(s): None

The instrument of the voice encompasses a gamut of musical styles and appears in all musical traditions. This course hones song writing skills and deals with matters such as 1) melodic and rhythmic profiling; 2) breathing and phrasing; 3) modes of voicing and mouth shapes; 4) the singing body; 5) nonlinguistic vocal space.

Students will be exposed to various musical traditions ranging from medieval to contemporary pop, jazz and non-Western and students may compose for any idiom. The course will involve collaboration with a trained singer who will perform student's original songs. No background knowledge of music is required.

YHU2286 Daily Themes

Instructor: Lawrence Ypil

Pre-requisite(s): Entrance to this module requires submission a writing sample of not more than 3,000 words total. This can contain essays (personal and/or academic), poems, stories, a play or a mix of genres. Please submit your portfolio with a cover letter stating your interest no later than noon of **Wednesday, 8 November 2017** to writers.centre@yale-nus.edu.sg. Admission will be on a rolling basis and the class will be closed to further enrolment once the cap has been reached.

This is course is a writing-intensive course where students are expected to write 300-word essays every weekday for 13 weeks. The course introduces students to the fundamentals of creative/expository writing by focusing on different craft elements such as character development, setting, imagery, surprise, and closure among others. It encourages an expansive repertoire of themes and concerns throughout the semester while building upon the rigor of daily writing practices.

YHU2287 Neo-Confucianism and Chinese Buddhism

Instructor: Bryan Van Norden

Pre-requisite(s): None

This course is an introduction to Neo-Confucianism, one of the most influential intellectual movements in East Asia. Neo-Confucianism combines a profound metaphysics with a subtle theory of ethical cultivation. There is also discussion of Chinese Mahayana Buddhism, whose views of the self and ethics are the primary targets of the Neo-Confucian critique.

YHU3201 Drawing Process

Instructor: Yanyun Chen

Pre-requisite(s): None

This module develops students' understanding of image-making, through the process of researching artists' oeuvres. By closely studying the body of works of selected artists, students will analyse the changes and shifts in their art-making, and the developments in their visual works. Students will learn to mimic, to draw inspiration, and to challenge their own preconceptions of artists, art works and art movements. Student will develop and evolve their own works/themes/ideas inspired by artists discussed, and develop an idea and a process into making their own work. The course fulfils the *practice* requirement within the structure of the Arts & Humanities.

YHU3202 Permeable Boundaries: Music and Cultural Encounter

Instructor: Sarah Weiss

Pre-requisite(s): None

Reading theories of hybridity, postcoloniality, and difference, we will explore the musical results of cultural interaction in various locations/periods. Themes of appropriation, representation, globalization, and identity will be explored and students will engage in critiquing and developing their own theories of musical hybridity/cultural interaction. Case studies may include: Appalachian *Bluegrass* – backwoods to hipster; South Asian *Bhangra* and diasporic identity; *Mariachi* and male/Mexican identity; Indonesian nationalism and *Kroncong*; Singaporean Chinese orchestra, *Getai*, and non-mainland Chinese identities; Malay Mak Yong revival in Singapore; reconstructions and rediscoveries of (hybrid) authenticity in the form of Irish/Celtic music and Yo-yo Ma's Silk Road Project; perspectives on living and performing hybridity in postcolonial contexts from Albert Memmi and José Vasconcelos to Homi Bhabha and Tommy Koh.

YHU3205 Ming Imperial Voyages

Instructor: Claudine Ang

Pre-requisite(s): None

From 1405 to 1433, the Ming admiral Zheng He (Cheng Ho) led seven extravagant expeditions to kingdoms in Southeast Asia and around the Indian Ocean world, going as far as the African continent. In this Historical Immersion course, we will examine the life of this eunuch-admiral and explore the nature of his voyages. We will also study the policies and ambitions of Zheng He's patron, the Emperor Yongle, and consider his lasting legacy today.

YHU3210C Proseminar in Literary Studies

Instructor: Andrew Hui

Pre-requisite(s): YCC1111 Literature and Humanities 1 and YCC1112 Literature and Humanities 2; or permission of the instructor.

The proseminar in literary studies introduces students to the comparative study of literary form. This year, we will focus on Shakespeare's plays and poetry as a springboard to explore the theoretical and literary critical approaches from around the world.

YHU3211 Chinese Tales of the Strange

Instructor: Scott Cook

Pre-requisite(s): YHU2212 Introduction to Classical Chinese, or A-level Chinese Proficiency or permission of the instructor.

This course will examine the Chinese literary genre of "Tales of the Strange," from its earliest beginnings all the way to its later instantiations in late-imperial times. All the primary readings will be in the original classical Chinese, and these will be supplemented by secondary readings in both English and Chinese.

YHU3221 Nietzsche: An Untimely Thinker and His Times

Instructor: Taran Kang

Pre-requisite(s): None

In the 1880s, the German philosopher Friedrich Nietzsche proclaimed the death of God and called for a new life-affirming philosophy to combat the rise of nihilism. Nietzsche, one of the most provocative thinkers of the nineteenth century, lived in an age of cultural tumult and intellectual transformation. This course provides a window into this period through a close engagement with Nietzsche's writings, including his philosophical works, his personal correspondence, and his autobiography. Attention will also be paid to his friendship and subsequent disillusionment with the composer Richard Wagner.

YHU3225 Pompeii: Art, Urban Life, and Culture in the Roman Empire

Instructor: Emanuel Mayer

Pre-requisite(s): None

Pompeii provides us with a vivid glimpse into the economic, political, and cultural life of an ancient Mediterranean city and into that of the Roman Empire at large. The long history of Pompeii closely maps onto the evolution of Rome from an Italian city-state into a cosmopolitan world-empire. In this course, we will discuss the use - and misuse - of literary, documentary, epigraphic, and archaeological evidence in the practice of pre-modern history. We will cover the high and the low, from taverns, brothels and workshops to the business of wealthy merchants, local politicians and members of the imperial family.

YHU3252 The Age of Nero

Instructor: Steven Green

Pre-requisite(s): Completion of Year 1 and 2 Common Curriculum modules; or permission of the instructor.

Today, Nero (37-68 CE) is primarily remembered for his cruel and capricious behaviour. However, his reign was also a watershed in Roman history. Nero had to navigate the Empire through a period in which political, social, and cultural conflicts that Rome's first four emperors had failed to resolve came to a head. In this

course, we will study a wide range of sources that document Nero's age, including historical accounts, literary texts, archaeological finds, inscriptions, and coins. In addition to primary sources, we will examine how modern historians construct their narratives and address controversies that are debated to this day.

YHU3256 1887: Pasteur, Holmes, Yersin, Rizal

Instructor: Tony Day

Pre-requisite(s): Completed all Year 1 and 2 Common Curriculum modules; or permission of the instructor.

In this course we will study scientific method, imperialism, anarchism and anti-colonial thought in the last two decades of the nineteenth century. Our starting point is 1887, the year in which the Pasteur Institute was founded; the first Sherlock Holmes novel was published; and the Filipino ophthalmologist and nationalist Jose Rizal published the first of his incendiary anti-colonial novels, *Noli Me Tangere*. Students will read novels and biographies as historical sources and think about the role of "great men," global networks, and scientific discovery in the formation of imperialism, and reactions to it, in urban Europe and colonial Southeast Asia.

YHU3273 Intermediate Oil Painting

Instructor: Joshua Yang

Pre-requisite(s): YHU2266 Introduction to Oil Painting; or permission of the instructor.

The course fulfils the *practice* requirement within the structure of the Arts and Humanities. This module will further develop students' skills in paint handling coupled with a more in-depth knowledge of colour theory. Students will study in greater depth how artists controlled colour from examples in the history of painting. Students will embark on four paintings from start to finish using the skills learned in YHU2266 Introduction to Oil Painting.

YHU3278 Globalization in Southeast Asian History

Instructor: Barbara Andaya

Pre-requisite(s): Completed year 1 and 2 Common Curriculum, and preferably one History module at 2000 level; or permission of the instructor.

This interdisciplinary course is designed for students with an interest in 'globalization' in Southeast Asia. Approaching this topic through a historical and comparative perspective, it will track the region's evolving interaction with global forces from early times to the present. Focusing on topics that range from economics to performance and social media, the course will consider the different ways in which Southeast Asian societies have been affected by, and have participated in, the circulation of global influences in an ever-shrinking world.

YHU3281 English Women Novelists: the Brontës to George Eliot

Instructor: Jane Nardin

Pre-requisite(s): YCC1111 Literature and Humanities 1 and YCC1112 Literature and Humanities 2; or permission of instructor

During the nineteenth century, England produced many important women novelists. Perhaps for the first time in history, women achieved parity with men in their contributions to a significant literary genre. In this course, we will consider the galling restrictions on form and content with which female novelists had to contend and how they dealt with those restrictions. We will examine what women novelists had to say about gender, including the contemporary ideologies of "separate spheres" and "the angel in the house"; about colonialism and industrialization; about social class; about sexuality; and about religious faith and religious doubt.

YHU3282 Equiano's Slave Narrative: Texts & Contexts

Instructor: Nienke Boer

Pre-requisite(s): Completion of Year 1 and 2 Common Curriculum modules; or permission of instructor

This course uses *The Interesting Narrative of the Life of Olaudah Equiano*, first published in 1789, to investigate both the invention of a new genre—the Atlantic slave narrative—and the historical context that shaped Equiano's life. Written by a former slave and key antislavery activist, this multi-layered text personalizes major historical events, including the slave trade in West Africa, the transportation of 12 million Africans to America, and the anti-slavery movement. Combining aspects of the captivity narrative, travel writing, and spiritual autobiography, *The Interesting Narrative* will be treated as both a historical source and a literary work.

YHU3283 Fundamental Reality

Instructor: Neil Mehta

Pre-requisite(s): None

This course begins with the following question: What exists, fundamentally speaking? We will consider how to frame the question, how to answer it, and how to appreciate its significance, using formal methods as appropriate.

YHU3285 Rebellion and Revolution in Vietnam

Instructor: Claudine Ang

Pre-requisite(s): None

Preclusion: YHU3226 Modern Vietnamese History and Literature; or with the permission of the instructor.

Rebellions and revolutions offer us moments through which to examine both disruptions and continuities in nineteenth- and twentieth-century Vietnamese history. This course studies Vietnam's past through its own cultural production of knowledge, and it investigates Vietnam's ethnic minority revolts, anti-colonial rebellions, and the literary revolution of the 1920s and 1930s. The major historical periods covered in this class are: territorial expansion, colonization, independence, and war. We will read the political and literary works that emerged during these periods, which include poems, short stories, novels, manifestos, and films. Note: the works will be studied in translation.

YHU4101 History Capstone Project

Instructor: -

Pre-requisite(s): Completion of all Year 1 and 2 Common Curriculum Modules; or permission of the instructor.

The History Capstone Project is a year-long 10-MC module, straddling over two semesters. It is a compulsory module that students in the History major must complete in order to graduate. It allows students the opportunity to pursue, in depth, an advanced project of their own choosing, while working closely with a

faculty supervisor. Students will work on an advanced creative and/or research or experiential project that integrates skills from the Common Curriculum and learning in the major. The Capstone Project will culminate in a substantial piece of work that reflects a deep engagement with the topic.

YHU4102 Literature Capstone Project

Instructor: -

Pre-requisite(s): Completion of all Year 1 and 2 Common Curriculum Modules; or permission of the instructor.

The Literature Capstone Project is a year-long 10-MC module, straddling over two semesters. It is a compulsory module that students in the Literature major must complete in order to graduate. It allows students the opportunity to pursue, in depth, an advanced project of their own choosing, while working closely with a faculty supervisor. Students will work on an advanced creative and/or research or experiential project that integrates skills from the Common Curriculum and learning in the major. The Capstone Project will culminate in a substantial piece of work that reflects a deep engagement with the topic.

YHU4103 Philosophy Capstone Project

Instructor: -

Pre-requisite(s): Completion of all Year 1 and 2 Common Curriculum Modules; or permission of the instructor; or permission of the instructor.

The Philosophy Capstone Project is a year-long 10-MC module, straddling over two semesters. It is a compulsory module that students in the Philosophy major must complete in order to graduate. It allows students the opportunity to pursue, in depth, an advanced project of their own choosing, while working closely with a faculty supervisor. Students will work on an advanced creative and/or research or experiential project that integrates skills from the Common Curriculum and learning in the major. The Capstone Project will culminate in a substantial piece of work that reflects a deep engagement with the topic.

YHU4104 Arts and Humanities Capstone Project

Instructor: Pattaratorn Chirapavati

Pre-requisite(s): Completion of all Year 1 and 2 Common Curriculum Modules; or permission of the instructor; or permission of the instructor.

The Arts and Humanities Capstone Project is a year-long 10-MC module, straddling over two semesters. It is a compulsory module that students in the Arts and Humanities major must complete in order to graduate. It allows students the opportunity to pursue, in depth, an advanced project of their own choosing, while working closely with a faculty supervisor. Students will work on an advanced creative and/or research or experiential project that integrates skills from the Common Curriculum and learning in the major. The Capstone Project will culminate in a substantial piece of work that reflects a deep engagement with the topic.

YHU4206 The History of History

Instructor: Taran Kang

Pre-requisite(s): Open to 4th year students only, History majors prioritised; or permission of the instructor.

Practitioners of every discipline benefit from having an understanding of their discipline's history. This is especially true for historians, whose work demands an acquaintance with the history of the writing practices and the modes of conceptualizing the past to which they are heirs. Through an engagement with foundational texts from the eighteenth century to the present, this course explores the emergence and development of modern historiography. Students will learn about the diverse ways in which the past has been represented, narrated, and interpreted; they will also examine how historians' interpretations of the past are themselves imbedded in specific historical contexts.

YHU4215 Advanced Fiction Writing

Instructor: Robin Hemley

Pre-requisite(s): YHU1212 Introduction to Fiction or special permission of the instructor. Entrance to into this module requires submission of a portfolio of one or two stories of no more than 3000 words combined. Please submit your portfolio with a cover letter stating your interest no later than noon of **Wednesday, 8 November 2017** to writers.centre@yale-nus.edu.sg. Admission will be on a rolling basis and the class will be closed to further enrolment once the cap has been reached.

This course builds upon the processes and models learned in Introduction to Fiction. A further development and refinement of techniques previously learned will be the focus of this course. There will be readings assigned, but this will mainly be a writing course with weekly writing assignments and peer critiques.

YHU4227 Ancient Humour: Greece and Rome

Instructor: Mira Seo

Pre-requisite(s): YCC1111 Literature and Humanities 1 and YCC1112 Literature and Humanities 2 and one literature elective; or permission of instructor

What kinds of humour endure over time? This course examines the different genres of humour in ancient literature and their corresponding forms today: political satire in Attic comedy; sitcoms in Hellenistic comedy; farce in Roman comedy; "stand up" in first person Roman satire. What does comedy tell us about the dynamics of power and gender in ancient cultures and today?

YHU4228 Oceanic Frameworks: Shifting Currents in Lit. Studies

Instructor: Nienke Boer

Pre-requisite(s): YHU3210 Proseminar in Literary Studies or one literature module or permission of instructor

Examining regional and transnational oceanic frameworks, including Mediterranean Studies, Transpacific Studies, Transatlantic Studies (including the Black Atlantic) and Indian Ocean Studies, this course asks what these transoceanic perspectives offer students of literature and the arts. Oceanic frameworks allow for interdisciplinary work, and can be combined with feminist, queer, eco-critical, digital humanities and postcolonial approaches. We will also be exploring the idea of hydro-poetics, the creative practice of writing about/on water, and thinking about the ocean as an artistic, cultural and creative space. Incorporating theoretical and fictional texts, this course offers students the opportunity to produce a creative final project.

YHU4229 Plato on Knowing and Being Good

Instructor: Amber Carpenter

Pre-requisite(s): Completed at least two other Philosophy modules prior to enrolment; or with the permission of the instructor.

Knowing makes you a good person, and seeking to know is morally improving. Plato apparently commits himself to these crazy claims. We will investigate why. What is knowledge such that seeking it is good for us? What effect does inquiry have on character? How must we conceive of the good if knowing is not to be merely instrumentally good? Does it matter, morally, which conception of knowledge we have? To address this latter question, we will consider the much different epistemology of the Indian Buddhists, who also consider knowledge to be indispensable to the ultimate good.

YHU4230 The Politics of Dress in Pre-Modern Southeast Asia

Instructor: Pattaratorn Chirapravati

Pre-requisite(s): YHU1209 Introduction to the Arts; or with the permission of the instructor.

This module focuses on refashioning identity by the usage of clothes. It also focuses on the history of dress across Southeast Asia during the colonial, post-colonial and early modern periods (late eighteenth to early twentieth centuries). We will explore the way in which the dress of various Asian elites expressed notions, traditions, ethnic differences, identity, and political power during these historical periods. Hybridized dress styles between “traditional” and “modern” were used as political tools in reaction to the intense cultural interactions and colonial expansion, as well as the global cosmopolitan influence of the Victorian way of life.

YHU4231 Ancient Economies of the Mediterranean and Western Asia

Instructor: Emanuel Mayer

Pre-requisite(s): YCC2121 Modern Social Thought; or with the permission of the instructor

This 4000 level module introduces students to one of the most discussed fields of ancient history. New work on the ancient economy has called into question the communis opinio on the social structure of pre-modern societies, and is key to an emerging consensus on the very high degree of economic, social, and political complexity of the Ancient World. Using a vast range of diverse and fragmented sources, the course will further introduce students to all key epistemological issues of ancient history.

YHU4232 Making performance, Generating Meaning

Instructor: Lee Chee Keng

Pre-requisite(s): YCC1111 Literature and Humanities 1 and YCC1113 Philosophy and Political Thought 1 and YCC1121 Comparative Social Institutions and YCC1131 Scientific Inquiry and YHU2275 Implicit body Explicit Action; or with the permission of the instructor.

This course provides students a guided experience in the development of performance practice including the selection and sequencing of dramatic conventions to generate meaning. Students will revisit, re-examine and apply the knowledge and skills they acquired, including acting, writing, dramaturgy and collaboration and apply these in the creation of individual as well as group devised creative product. Students will immerse in performance development process to produce an original devised performance. Through the process, they will develop knowledge of the languages and grammar of performance making as well as creative and critical thinking to design and lead extended performance making process.

YHU4233 Violence, Poetry and the Arts

Instructor: Rajeev Patke

Pre-requisite(s): Common Curriculum courses and at least one module at 2000 and one at 3000 should have been completed for either Arts and Humanities or Literature before enrolling for this module.

This module aims to study creativity in all the circumstances where art and poetry confront violence as a fact of life, whether in the form of violence to oneself or others, or to the environment or to institutions and values. The module draws examples from the history of art and poetry to address a single question: what can art and poetry do about the utter negativity that is violence? The module will aim to study the nature of violence on the scale of the individual and the group, and as having implications for gender, race, sexuality, politics, ideology, and ethics.

YID1201 Introduction to Environmental Studies

Instructor: Marvin Montefrio

Pre-requisite(s): None

This module introduces students to the field of environmental studies. We explore the core concerns of the field, its history, its primary methods of analysis, and a number of pressing environmental challenges to human well-being. We also examine how insights from the humanities, the social sciences, and the natural sciences can be integrated to analyze environmental problems and generate responses to them.

YID2203 Ecology and Ecosystems

Instructor: Michiel van Breugel

Pre-requisite: None. For environmental studies students, Intro to Env. Studies is recommended but not required; or with the permission of the instructor.

Ecology investigates the complex interactions between organisms and their environment, including other organisms. This course asks how life-history strategies, environmental conditions, and local biotic interactions (e.g. competition, trophic interactions) shape the structure and dynamics of natural communities (e.g. functional composition, diversity, productivity, stability, and food webs). It also explores how natural communities form metacommunities over larger spatial scales and across ecosystems boundaries. Students draw on selected case studies to examine (1) links between biodiversity and ecosystem productivity, stability, and resilience; and (2) management options for biodiversity and ecosystem services in human-dominated landscapes.

YID2207 Social Theory and the Environment

Instructor: Marvin Montefrio

Pre-requisite: YCC2121 Modern Social Thought, and YID1201 Introduction to Environmental Studies; or with the permission of the instructor.

Co-requisite(s): YID1201 Introduction to Environmental Studies; or with the permission of the instructor.

This foundational module in environmental studies introduces students to social theories applicable to socio-ecological problems. It equips students with the theoretical knowledge for social scientific analysis expected in upper-level environmental studies courses and the capstone project. As an interdisciplinary module, students will be introduced to concepts and theories in environmental sociology, environmental anthropology, political ecology, and science and technology studies, among others.

YID2208 Foundations of Environmental Humanities

Instructor: Matthew Schneider-Mayerson

Pre-requisite: YID1201 Introduction to Environmental Studies or permission of the instructor

This course surveys the contribution of humanities disciplines—literature, art, history, religious studies, and philosophy—to understanding the relationships among human beings, nonhuman beings, and the techno-natural world we inhabit. Students will read influential works in ecocriticism and environmental humanities and analyse relevant texts, such as novels, films, art, and music. Specific topics will include the role of art, literature and popular culture in shaping and reflecting beliefs about ‘the environment’; bioregionalism; environmental ethics and values; animals; posthumanism; climate change fiction; and the Anthropocene.

YID3202D Special Topics in Environmental Studies: Climate Change and the Future of Energy

Instructor: Daniel Esty

Pre-requisite: None

Co-requisite: YID1201 Introduction to Environmental Studies

This course is an interdisciplinary examination of climate change and policy challenges around developing energy systems for a sustainable future. We will analyse existing frameworks of treaties, laws, regulations, and policies -- and the incentivisation of greenhouse gas build-up. What would 21st century frameworks designed to deliver a sustainable energy future and successful responses to climate change look like? Does the 2015 Paris Climate Change Agreement provide the right foundation for action? How should equity be addressed? How are incentives structured to engage businesses in climate change problem solving and to spur innovation? The class will be meet during the first six weeks of class (two 90 minute class meetings), with an extra one-hour consultation per week. Students will engage in a four-day case competition during recess week, supplemented by site visits and engagement with local experts relevant to the themes of the course. **Students unable to meet for four consecutive break days during recess week should not enrol in this module.** The course will not meet during the final seven weeks of the semester; Prof. Esty will cover 5-MC worth of material in the first six weeks of instruction, plus four days of intensive work during the recess week.

YID3212 Risk and Geohazard

Instructor: Brian McADoo

Pre-requisite: YID1201 Introduction to Environmental Studies, or permission of the instructor.

The world is a risky place. Every year, natural hazards affect millions of people, with increasingly expensive losses. This course explores risk associated with geophysical phenomena. Are there more hazardous events now than in the past? Are these events somehow more energetic? Or are increasing populations with increasingly disparate incomes being exposed to hazards? What physical, economic, political and social tools can be employed to reduce this risk? We draw on examples from recent disasters, both rapid onset (earthquakes, tsunamis, cyclones), and slow onset (climate change, famine) to examine complex and interlinked vulnerabilities in the coupled human-environment system.

YID4101 Environmental Studies Capstone Project

Instructor: Marvin Montefrio

Pre-requisite: Completion of all Year 1 and 2 Common Curriculum Modules; or permission of the instructor.

The Environmental Studies Capstone Project is a year-long 10-MC module, straddling over two semesters. It is a compulsory module that students in the Environmental Studies major must complete in order to graduate. It allows students the opportunity to pursue, in depth, an advanced project of their own choosing, while working closely with a faculty supervisor. Students will work on an advanced creative and/or research or experiential project that integrates skills from the Common Curriculum and learning in the major. The Capstone Project will culminate in a substantial piece of work that reflects a deep engagement with the topic.

YID4202 Applied Environmental Research

Instructor: Matthew Schneider-Mayerson

Pre-requisite: Open only to 3rd and 4th year ES majors only; or permission of the instructor.

This seminar is an applied and collaborative problem-solving course that reproduced the dynamics of an innovative environmental-consulting firm while enhancing the ability of students to effectively contribute to multi-disciplinary research teams. The module is required of all students majoring in environmental studies, and is open only to those students.

YSS1203 Principles of Economics

Instructor: Guillem Riambau

Pre-requisite: None

Preclusion: A level Mathematics and A level Economics (or equivalent mathematics and economics courses); or permission of the instructor.

Economists are mainly concerned with the study of choice: choices made by consumers (buy the latest gizmo or save the money?), firms (how much to produce and what price to charge?) and policy-makers (bailout the banks or reduce income tax rates?) are all within the purview of economic analysis. This module serves as an introduction to economics and the basic mathematical tools for economic analysis. It covers topics in microeconomics, macroeconomics, univariate calculus, and systems of equations.

YSS1205 Introduction to Game Theory

Instructor: Francis Dennig

Pre-requisite: None, but the course will use basic calculus and probability. Students should also be prepared to use logical reasoning and mathematical expressions.

Game theory studies strategic situations where the involved parties impact each other’s welfare through their individual decisions. In such situations, it becomes necessary to think about how others will act while trying to further one’s own goals. Game theory has wide ranging applications and is used to model strategic interactions in both human and biological worlds. This course introduces students to concepts in game theory and their applications.

YSS1206 Introduction to Comparative Politics

Instructor: Parashar Kulkarni

Pre-requisite: None

This course is an introduction to the study of political institutions, processes, structures, policies, and outcomes, both within and across countries. Students will learn how to understand and evaluate the similarities and differences between political systems, as well as the intricacies of specific case studies. The course will introduce students to some of the key themes, methods, and questions used in comparing polities across time and space.

YSS2201 Understanding Behavior and Cognition

Instructor: Jean Liu

Pre-requisite: None

This course will introduce students to themselves and others as viewed through the lens of psychology. We will present and explore the scientific study of human (and animal) behaviour, seeking to understand why we think, feel, and act as we do. The goal is to build a firm foundation for those wishing to major in psychology while simultaneously providing an interesting and revealing elective to those visiting psychology on their way to other disciplines.

YSS2202 International Relations

Instructor: Markus Pauli

Pre-requisite: None

This course introduces students to concepts, theories, and cases associated with the study of international politics. We will study contemporary scholarly texts and examine empirical evidence relating to key historical experiences such as the Cold War, which inform contemporary international relations theories.

YSS2203 Intermediate Microeconomics

Instructor: Benny Lam

Pre-requisite: YSS1203 Principles of Economics or A-level or equivalent Mathematics; or permission of the instructor.

Microeconomics analyses individual decision making and its implications for economic outcomes. Here the term "individual" is used broadly to include individuals, households and firms. We deconstruct the demand-supply model by analyzing consumers' choices as outcomes of rational preference maximization and producers' decisions as results of profit maximization in various market structures. We study how equilibrium of demand and supply in competitive markets generates efficient outcomes. We then analyze a variety of instances when markets fail to be efficient. This course will place special emphasis upon mathematical foundations of theoretical models. In particular, we will study and apply techniques in multivariate calculus, and unconstrained and constrained optimization.

YSS2207 Introduction to Social Psychology

Instructor: Paul O'Keefe

Pre-requisite: YSS2201 Understanding Behaviour and Cognition; or permission of the instructor.

Humans are known as social animals for a reason. There is no part of our lives that is not influenced in one way or another by our social interactions. In this course we will be exploring the ways in which we are influenced by our social environment, how we influence others, how we think about social situations, how we related to other people and the implications for understanding human behaviour.

YSS2210 Contemporary Social Theory

Instructor: Phil Gorski

Pre-requisite: YCC2121 Modern Social Thought; or permission of the instructor.

This course provides a general introduction to the main currents in social theory from World War II up to the present day. It covers key works from across the social sciences by seminal thinkers such Edward Said, Albert Hirschman, Martha Nussbaum and Pierre Bourdieu. The course is in three parts. Part I asks "what is the social" and "what can we know about it?" Part II examines competing conceptualizations of society in terms of markets, culture, institutions, social fields and actor networks. Part III looks at rival theorizations of public life, human freedom, ethnicity and modernity.

YSS2211 Econometrics

Instructor: Eugene Choo

Pre-requisite: YSS1203 Principles of Economics, or YSS2203 Intermediate Microeconomics, or A-level Economics and Mathematics or equivalent economics and mathematics courses; or permission of the instructor.

Does going to college increase your earnings? Does height have an effect your wage? Do episodes like the haze 2013 in Singapore have a major impact to the economy? This course introduces students to the statistical methods that economists use to answer this and similar questions. More generally, this is an introduction to the methods used to test economic models and examine empirical relationships, primarily regression analysis. Although much of the course will focus on the mathematical development of the methodology, emphasis is placed on learning by studying and replicating specific case studies that address current economic questions.

YSS2214 Intermediate Macroeconomics

Instructor: Yu-Hsiang Lei

Pre-requisite: YSS1203 Principles of Economics, or YSS2203 Intermediate Microeconomics, or A-level Economics and Mathematics or equivalent economics and mathematics courses; or permission of the instructor.

Economics is concerned with the study of how individuals make decisions and how these decisions affect, and in turn are affected by, the distribution of limited resources in society. This course introduces students to the formal analysis of the economy as a whole. The goal is to understand how decisions by the firms, consumers and institutions affect the markets, and the welfare implications of such choices for society. Special attention is placed on the effect of government and monetary policies on the economy. Emphasis is placed upon the mathematical foundations of theoretical models.

YSS2220 Introduction to Urban Studies

Instructor: Cheng Yi'En, Shin Eun Jin, Valentina Zuin

Pre-requisite: None

This course offers an introduction to urban studies. It inquires into the evolution of cities historically as well as contemporary processes of urbanization. The course also introduces students to key explanatory frameworks for understanding the contemporary economic and social function of cities. The course can be taken as a gateway to the Urban Studies major or as an elective

YSS2221 International Security

Instructor: Kim Dong Jung

Pre-requisite: None

This course offers students an in-depth learning experience in the field of Security Studies. The topics on offer will vary from year to year, but will pertain to specific questions, debates, and literatures in the field of international security.

YSS2224 Introduction to Global Affairs

Instructor: Nancy Gleason

Pre-requisite: None

This course introduces students to the key theories, issues and challenges in Global Affairs. Students considering majoring or minor in Global Affairs, or those seeking greater knowledge about how the world works, should take this course. Students will learn about the structure of the international system, theories of inequality and development, and about key State and non-state actors in Global Affairs. An interdisciplinary approach to understanding transboundary problems is applied. Students will also gain skills to critically assess global news sources on current issues, write about contemporary issues within a historical context, and in problem solving and oral communication.

YSS2227 Introduction to Anthropology

Instructor: Neena Mahadev

Pre-requisite: None

This survey course provides students with an overview of fundamental concepts, anthropological terms and disciplinary topics that are central to research in socio-cultural anthropology. Case studies grounded in ethnography illustrate the core principles of socio-cultural anthropology. Students upon completing this introductory course have a grasp of the range of topics, theoretical orientations, and fieldwork methods that socio-cultural anthropologists use in their research.

YSS3202 Ethnography

Instructor: Stuart Strange

Pre-requisite: None

In this course, students will understand what constitutes ethnographic field methods, what makes ethnographic writing different from other kinds of nonfiction writing, and the ethical and theoretical considerations within ethnographic research. Over the semester, students will conduct their own, small-scale ethnographic fieldwork, interviews and participant observation based in Singapore.

YSS3204 Development Economics

Instructor: Yu-Hsiang Lei

Pre-requisite: YSS2203 Intermediate Microeconomics and YSS2211 Econometrics; or permission of the instructor.

This course focuses on the understanding of the process of economic development. The course will be structured around the four main questions: (1) Why are some countries much poorer than others? (2) What are the main barriers to the process of economic development? (3) What are the main barriers that prevent the poor to escape from poverty?, and (4) Why do these barriers exist and persist?

~~**YSS3205 International Trade** (no longer offered in Semester 2, AY2017/2018)~~

~~Instructor: Liu Yibei~~

~~**Pre-requisite:** YSS2203 Intermediate Microeconomics; or permission of the instructor.~~

~~In this course, we will study the theoretical and empirical foundations and policies of international trade at a fairly abstract and rigorous level. The course materials and lectures will employ mathematics. The issues that will be addressed include the causes of international trade, the gains from trade, the role of international capital movements, the effects of trade and investment barriers, etc. We will also read about real world areas of trade, such as trade institutions, the interactions between trade and development issues, etc. We will study models in trade and apply them to questions of interest in the real world.~~

~~**YSS3208 Advanced Microeconomics** (no longer offered in Semester 2, AY2017/2018)~~

~~Instructor: Benny Lam~~

~~**Pre-requisite:** YSS2203 Intermediate Microeconomics; or permission of the instructor.~~

~~This broadly covers the same range of topics as 'Intermediate Economics'. However it has a more intensive treatment of consumer and producer theory, and covers additional topics like choice under uncertainty, game theory, contracting under hidden actions or hidden information, externalities and public goods, asset pricing, auctions, and general equilibrium theory.~~

YSS3212 Chinese Politics

Instructor: Steven Oliver

Pre-requisite: None

The course will focus on the political processes of China. Topics may include authoritarian and bureaucratic structures, institutions and institutional design, social and protest movements, Chinese foreign affairs and relations, Chinese political economy, national versus sub-national versus local politics, and legal structures.

YSS3214 Abnormal Psychology

Instructor: Keng Shian Ling

Pre-requisite: YSS2201 Understanding Behaviour and Cognition; or permission of the instructor.

This course introduces students to the field of abnormal psychology and the treatment of psychological disorders.

YSS3222 Urban Theory

Instructor: Nicholas Smith

Pre-requisite: YCC2121 Modern Social Thought and YSS2220 Introduction to Urban Studies; or permission of the instructor.

This course introduces students to key approaches to understanding urbanization. Each week, we will read selections from a single text in urban studies, examining the text for its methodological techniques, disciplinary perspectives, central urban questions, and key arguments. The course takes an interdisciplinary approach and is divided into three main units: architectural, Marxist, and sociological.

YSS3224 International Finance

Instructor: Liu Yibei

Pre-requisite: YSS2203 Intermediate Microeconomics and YSS2214 Intermediate Macroeconomics; or permission of the instructor.

This course is an overview of international macroeconomic theory and policy. It presents economic theories to foster understanding of international financial markets and the interrelationships of economic aggregates such as GDP, exchange rates, trade balances, etc. Models will be applied to understand the effects and implications of macroeconomic policies in the international arena. The course will also look at relevant current issues: the global financial crisis, international coordination in macroeconomic policy, the economics of the Euro, etc. Students should have a working knowledge of algebra, graphical techniques and the basics of micro- and macro- economics.

YSS3231 Methods in the Social Sciences

Instructor: Markus Pauli and Cheng Yi'En

Pre-requisite: YCC1121 Comparative Social Institutions, YCC1122 Quantitative Reasoning, and YCC2121 Modern Social Thought; or permission of the instructor.

An introduction to various research methods in the social sciences, including survey methodology, quantitative data analysis, participant observation, and in-depth interviewing. This course can count as a course in the major for students in Urban Studies, Global Affairs, PPE, and Anthropology. It may fulfil the course requirements for students in Environmental Studies as well on a case-by-case basis after consultation with the Head of Studies of that major. The course also fulfils the methods requirement in Urban Studies and Global Affairs. Students in all of these majors should ideally take this course before they commence their capstone project.

YSS3235 Urban Spatial Reasoning and Representation (no longer offered in Semester 2, AY2017/2018)

Instructor: Aurel von Richthofen

Pre-requisite: None

Preclusion: GIS and Geovisualization (2MC) & GE2215 Introduction to GIS and Remote Sensing

~~This course offers students an introduction to geovisualization tools suitable for application to in urban studies. Students will learn about: the history of tools for the spatial analysis of urban environments, as well as current tools used in research and applied settings. Students in this course will be learn about figure-ground representations, land use and systems mapping, GIS, and participatory mapping. They will be given the opportunity to acquire, interrogate and manipulate digital data relevant for urban spatial analysis. They will learn about how to visualise data such that it effectively communicates what it represents.~~

YSS3237 Gender Perspectives in Anthropology

Instructor: Gabriele Koch

Pre-requisite: YCC1121 Comparative Social Institutions; or permission of the instructor.

Co-requisite: YCC2121 Modern Social Thought

This course introduces students to anthropological contributions to gender and sexuality in cross cultural perspective. The course focuses on the historical development of the field. We will explore various theoretical approaches including Margaret Mead's early work on cultural diversity; 1970s & 1980s feminist studies of gender universals and the subordination of women; 1990s interpretive approaches to gender constructions; more recent feminist and non-feminist studies of sexuality, the body, masculinity and queer theory.

YSS3238 US Foreign Policy

Instructor: Kim Dong Jung

Pre-requisite: This course is designed for juniors and seniors; or permission of the instructor.

This course examines the evolution of US foreign policy since 1900. The focus will be on assessing how US leaders have thought over time about interests, ideals, and strategies in the international realm. The course will also explore current challenges confronting the US in the world. On successful completion of the course a student should be able to: (1) demonstrate the evolution of US foreign policy agenda and strategy over the past century; (2) classify underlying rationale of important US foreign policy decisions; and (3) critically question the implications of US foreign policy on overall international relations.

YSS3246 Cities of the Global South

Instructor: Valentina Zuin

Pre-requisite: None

This course offers students an in-depth inquiry into the characteristics of urban organization and development in cities of the Global South, where there are high rates of urbanization. Students will examine a range of topics: migration and urbanization, formal and informal governance, housing and infrastructure, food security and environment. Students will also learn about the competing theoretical constructs used to explain such urbanization. Case studies will be drawn from a range of geographical locations.

YSS3248 Advanced Macroeconomics

Instructor: Benny Lam

Pre-requisite: YSS2214 Intermediate Macroeconomics; or permission of the instructor.

This course serves as an advanced introduction to modern macroeconomic analysis to understand the causes and consequences of macroeconomic fluctuations. We will explore at a deeper level some of the topics covered in Intermediate Macroeconomics, as well as some other research topics. Topics covered may include economic growth, business cycles, financial markets, monetary and fiscal policy etc.

YSS3254 Globalization on the Ground

Instructor: Anju Paul

Pre-requisite: YCC1121 Comparative Social Inquiry; or permission of the instructor.

Co-requisite(s): YCC2121 Modern Social Thought; or permission of the instructor.

Preclusion: previous code YSS2222

This course takes an ethnographic approach to the study of globalization, focusing on the impact it has on the daily lives of individuals, families, and communities around the world, and how they have responded in turn. Introducing students to how interpretative social science disciplines have approached the study of globalization, students will be assigned readings on different manifestations of globalization, including but not limited to the McDonaldization of society, the materials that enable globalization to take place, the international labor migration industry, the structure and composition of global cities, global crime, and the rise of anti-globalization social movements.

YSS3262 Global Cities

Instructor: Aditya Ranganath

Pre-requisite: YSS2220 Introduction to Urban Studies or YSS2224 Introduction to Global Affairs or YSS2218 International Political Economy; or permission of the instructor.

This course offers students an understanding of global cities. The course looks at key thinkers to have described and theorized global cities. We look at a number of global cities up close, including New York, Singapore and London.

YSS3263 Emotions and Politics

Instructor: Christina Tarnopolsky

Pre-requisite: YCC2121 Modern Social Thought; or permission of the instructor.

This course examines the role of emotions in liberal democratic practices and institutions and in contemporary democratic theory. The course will examine three different theoretical frameworks that have recently been used to understand the place of emotions in politics: 1) neuroscientific; 2) neo-Aristotelian; and 3) Freudian/psychoanalytic. It will focus on the different conceptions put forth by each of these frameworks and the different constellations of emotions that are analysed and/or advocated by these theories. Questions to be addressed include: Are there “negative” emotions? What criteria do we use to decide whether an emotion ought to be excluded from democratic practices?

YSS3264 Bubbles, Crashes, Panics and Crises

Instructor: John Driffill

Pre-requisite: YSS2203 Intermediate Microeconomics or YSS2214 Intermediate Macroeconomics or YSS1203 Principles of Economics; or permission of the instructor.

Financial markets are subject to periodic bouts of “irrational exuberance” that lead to bubbles in asset prices, frequently followed by a crash. These afflict particularly stock and foreign exchange markets and the banking industry. Despite repeated attempts to regulate finance, crises recur with remarkable frequency and regularity. In “This Time is Different”, Ken Rogoff and Carmen Reinhart document eight centuries of financial folly. These crises have profound effects on the real economy, leaving a legacy of unemployment and slow growth. We use economic analysis to study several financial, foreign exchange, and banking crises in their historical and social contexts.

YSS3265 Urban Economics

Instructor: Xia Xing

Pre-requisite: YSS2203 Intermediate Microeconomics; or permission of the instructor.

This class studies the economics of cities and urban problems by understanding the effects of geographic location on the decisions of individuals and firms. Traditional microeconomic models are typically spaceless, yet location and distance plays an increasingly important part in modern economics. We will study questions such as Why do cities exist? How do firms decide where to locate? Why do people live in cities? We will analyze the economic problems that arise as people and firms cluster in cities. We will also discuss specific urban economic problems such as firm location, crime, transportation, housing, education, and local government economics.

YSS3266 Social and Behavioural Foundations of Health

Instructor: Jeannette Ickovics

Pre-requisite: YSS2216 Statistics and Research Methods for Psychology; or permission of the instructor.

This module provides an introduction to the psychological, social and behavioural factors that influence patterns of health and health care delivery across the lifespan. We take a transdisciplinary perspective, considering the role of “micro” and “macro” factors that influence the health of individuals and the public (e.g., from genes to the environment). We will explore determinants and consequences as well as identify effective interventions to prevent disease and promote health. This course emphasizes the use of empirical evidence from the psychological, social, behavioural and biomedical sciences as the basis of public health practice and policy.

YSS3267 Lab in Cognitive Psychology

Instructor: Chris Asplund

Pre-requisite: YSS2201 Understanding Behaviour and Cognition and YSS2216 Statistics and Research Methods for Psychology; or permission of the instructor. YSS3215 Cognitive Psychology is helpful but not required.

This lab course explores how experiments are designed, conducted, analysed, and interpreted in the realm of cognitive psychology. Questions involving perception, reasoning, attention, and language will be addressed through a hands-on approach involving lab-based and online experimentation.

YSS3268 Anthropology of China

Instructor: Zachary Howlett

Pre-requisite: YSC2121 Modern Social Thought; or permission of the instructor.

The rise of China is creating unprecedented global challenges and opportunities. This course helps students achieve a nuanced cultural understanding of this potential superpower by critically examining the concepts of “China” and “Chineseness” from an anthropological perspective. Topics include ethnic relations, imperialism, and the civilized-barbarian distinction; gender, patriarchy, and the family; popular religion, popular culture, and rebellion; bureaucracy, corruption, and social connections (*guanxi*); and overseas Chinese and the Chinese diasporas. In addition to reading classic and contemporary works of China anthropology, students will watch some highly selected films and documentaries on China. No knowledge of the Chinese language is required.

YSS3269 Water and Waste in Urban Environments

Instructor: Valentina Zuin

Pre-requisite: None

This course will focus on water and sanitation (W&S) services in cities across the world, especially in developing countries. The seminar will develop critical thinking skills on the following issues: health and non-health impacts of W&S improvements; components of infrastructure, and institutional arrangements for the provision of W&S in developed and developing countries cities; supply versus demand oriented planning of W&S services; political, environmental, institutional, economic and financial challenges of improving W&S services in cities; strategies to target the poor and underserved; privatization; behavioural change theory; handwashing; and water scarcity. Examples will be used from cities around the world.

YSS3270 Ethics and Global Affairs

Instructor: William Bain

Pre-requisite: None

Preclusion(s): PS3233 Political and International Ethics

This module explores the ethical dimension of global affairs. It takes as its point of departure the conviction that global affairs, like all realms of human conduct, is intelligible in questions of obligation, right, good, and so forth. The module interrogates prominent ethical languages that pertain to sovereignty, war, international law, human rights, and moral scepticism. It then considers how these languages arise and conflict in a range of contemporary global issues. Particular emphasis is placed on excavating the ground on which ethic choices are made, defended, and judged.

YSS3271 Contemporary Political Comedy

Instructor: Parashar Kulkarni

Pre-requisite: None

This course examines the place of performed political comedy (daily shows and stand up, for the most part) in contemporary politics. It is interested in the content of comedy and its effects. We shall read some theory and ask questions regarding the role of the comic and the role of humour in political discourse. We will focus on political comedy in English across countries including Singapore, India, United States, and UK (you are encouraged to examine other countries and other languages). For grades, students will write a review of a particular political comedy in a specific country, prepare written material for a five minute performance, and read/perform the piece.

YSS3272 Urban Ecological Systems

Instructor: Stephen Pointing

Pre-requisite: One module in environmental studies OR one module in urban studies OR permission of the instructor.

With an increasingly urbanised human population the interaction of nature with the built environment and its human inhabitants is emerging as one of the greatest sources of both opportunity and inertia to goals of sustainability. In this course you will consider the extent to which urbanisation has changed natural ecosystems and led to the rise of a new urban ecology, and consider how humans can value and manage this in a socio-ecological context. We will then address how the confluence of climate change, globalisation and urbanisation are fundamentally altering our living space and the implications for human health and wellness.

YSS4101 Global Affairs Capstone Project

Instructor: William Bain

Pre-requisite: Completion of all Year 1 and 2 Common Curriculum Modules; or permission of the instructor.

The Global Affairs Capstone Project is a year-long 10-MC module, straddling over two semesters. It is a compulsory module that students in the Global Affairs major must complete in order to graduate. It allows students the opportunity to pursue, in depth, an advanced project of their own choosing, while working closely with a faculty supervisor. Students will work on an advanced creative and/or research or experiential project that integrates skills from the Common Curriculum and learning in the major. The Capstone Project will culminate in a substantial piece of work that reflects a deep engagement with the topic.

YSS4102 Psychology Capstone Project

Instructor: -

Pre-requisite: Completion of all Year 1 and 2 Common Curriculum Modules; or permission of the instructor.

The Psychology Capstone Project is a year-long 10-MC module, straddling over two semesters. It is a compulsory module that students in the Psychology major must complete in order to graduate. It allows students the opportunity to pursue, in depth, an advanced project of their own choosing, while working closely with a faculty supervisor. Students will work on an advanced creative and/or research or experiential project that integrates skills from the Common Curriculum and learning in the major. The Capstone Project will culminate in a substantial piece of work that reflects a deep engagement with the topic.

YSS4103 Anthropology Capstone Project

Instructor: Marcia Inhorn

Pre-requisite: Completion of all Year 1 and 2 Common Curriculum Modules; or permission of the instructor.

The Anthropology Capstone Project is a year-long 10-MC module, straddling over two semesters. It is a compulsory module that students in the Anthropology major must complete in order to graduate. It allows students the opportunity to pursue, in depth, an advanced project of their own choosing, while working closely with a faculty supervisor. Students will work on an advanced creative and/or research or experiential project that integrates skills from the Common Curriculum and learning in the major. The Capstone Project will culminate in a substantial piece of work that reflects a deep engagement with the topic.

YSS4104 Economics Capstone Project

Instructor: -

Pre-requisite: Completion of all Year 1 and 2 Common Curriculum Modules; or permission of the instructor.

The Economics Capstone Project is a year-long 10-MC module, straddling over two semesters. It is a compulsory module that students in the Economics major must complete in order to graduate. It allows students the opportunity to pursue, in depth, an advanced project of their own choosing, while working closely with a faculty supervisor. Students will work on an advanced creative and/or research or experiential project that integrates skills from the Common Curriculum and learning in the major. The Capstone Project will culminate in a substantial piece of work that reflects a deep engagement with the topic.

YSS4105 Urban Studies Capstone Project

Instructor: -

Pre-requisite: Completion of all Year 1 and 2 Common Curriculum Modules; or permission of the instructor.

The Urban Studies Capstone Project is a year-long 10-MC module, straddling over two semesters. It is a compulsory module that students in the Urban Studies major must complete in order to graduate. It allows students the opportunity to pursue, in depth, an advanced project of their own choosing, while working closely with a faculty supervisor. Students will work on an advanced creative and/or research or experiential project that integrates skills from the Common Curriculum and learning in the major. The Capstone Project will culminate in a substantial piece of work that reflects a deep engagement with the topic.

YSS4106 Politics, Philosophy and Economics Capstone Project

Instructor: -

Pre-requisite: Completion of all Year 1 and 2 Common Curriculum Modules; or permission of the instructor.

The Politics, Philosophy and Economics (PPE) Capstone Project is a year-long 10-MC module, straddling over two semesters. It is a compulsory module that students in the PPE major must complete in order to graduate. It allows students the opportunity to pursue, in depth, an advanced project of their own choosing, while working closely with a faculty supervisor. Students will work on an advanced creative and/or research or experiential project that integrates skills from the Common Curriculum and learning in the major. The Capstone Project will culminate in a substantial piece of work that reflects a deep engagement with the topic.

YSS4107 Capstone Project

Instructor: -

Pre-requisite: Completion of all Year 1 and 2 Common Curriculum Modules for DDP-Law Seniors; or permission of the instructor.

The Law and Liberal Arts DDP Capstone Project is a year-long 10-MC module straddling two semesters. It is a compulsory module that students in the DDP programme must complete in order to graduate. It allows students the opportunity to pursue, in depth, an advanced project of their own choosing while working closely with a supervisor. Students will work on an advanced research project that integrates both the Law and Liberal Arts components of the DDP programme.

~~YSS4202 Goals and Motivation (no longer offered in Semester 2, AY2017/2018)~~

~~Instructor: Paul O'Keefe~~

~~**Pre-requisite:** YSS2201 Understanding Behaviour and Cognition, and YSS2216 Statistics and Research Methods for Psychology Major; and at least one psychology class at the 3000 level or higher; or permission of the instructor.~~

~~This seminar will examine recent and influential work in personality and social psychology on motivational and self-regulatory processes contributing to the pursuit of goals. On successful completion of the course a student should be able to: Convey a deep understanding of motivational processes involved in the pursuit of goals. Also to conduct an effective literature review, construct novel and important hypotheses, competently critique the extant literature, design experiments, and write an effective research proposal.~~

YSS4205 Chinese Foreign Policy

Instructor: Chin-Hao Huang

Pre-requisite: YSS2202 International Relations; or permission of the instructor.

Students will gain a deeper understanding of the major contours of the debate and discussion on China's contemporary international relations. The course examines the political, diplomatic, military, and economic challenges facing China under conditions of uncertainty in the regional and international system and the processes through which China responds to and manages these external challenges. The course will analyse how existing theories of international relations and foreign policy analysis apply to China to gain a deeper appreciation of the factors that undergird conflict and cooperation in Chinese foreign policy.

YSS4211 India as a Rising Power, 1947-Present

Instructor: Rohan Mukherjee

Pre-requisite: YSS2202 International Relations; or permission of the instructor.

With the world's second largest population, third largest economy, and third largest military, India is a pivotal country in Asia and the world. This course will cover modern India's history, domestic politics, and foreign policy and provide students with a sophisticated understanding of the world's largest democracy and its changing place in global affairs. It will also locate India as a vital Asian power and highlight its historical ties with various countries in East and Southeast Asia. Students will learn how India's international behaviour fits or does not fit the claims and predictions of various strands of international relations theory.

~~YSS4223 Politics of Identity in Developing Countries (no longer offered in Semester 2, AY2017/2018)~~

~~Instructor: Risa Toha~~

~~**Pre-requisite:** YCC1121 Comparative Social Inquiry, YCC1122 Quantitative Reasoning, YSS1206 Introduction to Comparative Politics, and YSS3231 Methods in the Social Sciences. YSS2211 Econometrics may be taken in lieu of YSS3231 Methods in the Social Sciences; or permission of the instructor.~~

Co-requisite(s): YSS1206 Introduction to Comparative Politics; or permission of the instructor.

Preclusion: previous code YSS3234

This course is an upper level seminar that engages students in the study of identity and politics within political science. Students will become acquainted with various theories and approaches to understanding the construction and mobilization of identities: national, ethnic, religious, gender and sexual orientation. Drawing on the empirical literature on the politics of identity in Sub-Saharan Africa, South Asia, and Southeast Asia, students will learn how identities have been constructed, and how they in turn influence outcomes such as violence, voting behaviour, governance, inequality, and inter-group trust and cooperation.

YSS4224 Political Order and One-Party Rule

Instructor: Steven Oliver

Pre-requisite: None

The 20th and 21st centuries have seen an unprecedented global expansion in the number of one-party regimes. Despite not conforming to standard definitions of democracy, these regimes have proven more stable and developed faster than non-democracies with which they are often grouped. In this module, students will gain a deeper understanding of politics within such regimes from a comparative politics perspective. Topics covered include the conditions facilitating the establishment and spread of one-party regimes, how leaders manage threats originating from both inside and outside the regime, the role of elections, and the conditions in which transitions away from regimes occur.

YSS4225 Contemporary Continental Political Thought

Instructor: Ben Schupmann

Pre-requisite: YCC1113 Philosophy and Political Thought 1 and YCC1114 Philosophy and Political Thought 2; or permission of the instructor.

This module analyses the works of some of the most significant 20th and 21st century political and legal thinkers of the “continental” tradition. It traces the dialogue that emerges among them, in the process demonstrating arguments and counterarguments for their different positions and why their ideas matter for constitutional democratic states today. In the process, this module also provides students with a glimpse into how great academic debates unfold in writing.

YSS4226 Migration Policy

Instructor: Anju Paul

Pre-requisite: Completion of Year 1 and 2 of the Common Curriculum modules and YSS3201 International Migration; or permission of the instructor.

This 4000-level advanced course will engage students to key areas of contemporary policy concern in the realm of international migration. Adopting a global perspective, it focuses on both the international and domestic policies that deal with migration issues and migrants. The course will be divided into three broad units, the first focusing on policies instituted by net sending countries, the second on net receiving countries, and the third focusing on global/multinational/bilateral initiatives to manage/control migration.

~~**YSS4227 Topics in Applied Econometrics (no longer offered in Semester 2, AY2017/2018)**~~

~~Instructor: Eugene Choo~~

~~**Pre-requisite:** YSS2203 Intermediate Microeconomics and YSS2211 Econometrics; or permission of the instructor.~~

~~This course covers econometric techniques as applied in empirical work in economics, at a level that is accessible to advance undergraduates. The topics are divided into two categories: Market Valuations and Non-Market Valuations. We begin with demand and supply estimation and the computation of consumer and producer surpluses. We investigate the use of surplus measurements to evaluate the impact of policies and the introduction of new good. We then move towards estimating the ‘demand side’ of environmental economics. The focus will be on stated and revealed preferences techniques for estimating the non-market values associated with environmental and other public goods.~~

YSS4228 The Anthropology of Dreams and Sleep

Instructor: Stuart Strange

Pre-requisite: YCC1121 Comparative Social Inquiry and YCC2121 Modern Social Thought; or permission of the instructor.

This course is a comparative examination of the different ways people sleep and understand dreams, and the social consequences of these differences across cultures. It explores how people sleep and experience dreams shapes the broader ways knowledge, social relations, and wellbeing are conceived and enacted in human societies.

YSS4229 The Anthropology of Human Rights

Instructor: Gabriele Koch

Pre-requisite: YCC2121 Modern Social Thought and YSS2209 The Anthropological Imagination or YSS3202 Ethnography; or permission of the instructor.

This course explores anthropological perspectives on how human rights discourses are produced and used in the world today. While the modern idea of human rights was only formalized in the aftermath of the Second World War, since that time, human rights discourses have spread around the world and been adopted transnationally by widely varying actors. Starting from the premise that the transnational discourse of rights must be understood in local contexts, we will explore the meaning and use of human rights from different perspectives.

YSS4230 Psychology of Mindfulness

Instructor: Keng Shian Ling

Pre-requisite: YSS2201 Understanding Behaviour and Cognition, and YSS2216 Statistics and Research Methods for Psychology; or permission of the instructor. Additionally, YSS3214 Abnormal Psychology is recommended but not compulsory.

This module provides a theoretical and empirical overview to the emerging field of mindfulness. It introduces students to the scientific research and applications of mindfulness-related processes and interventions (e.g., mindfulness-based stress reduction, dialectical behavior therapy) across domains such as mental health, behavioral medicine, education, and cognitive neuroscience. The module also provides students with an opportunity to engage in formal and informal mindfulness practices. It is suitable for students interested in acquiring not only a critical, scholarly understanding of the topic, but also an experiential understanding of mindfulness practice and how it relates to various aspects of one’s life.

YSS4231 Parenting and Child Development

Instructor: Cheung Hoi Shan

Pre-requisite: YSS2201 Understanding Behaviour and Cognition and YSS2216 Statistics and Research Methods for Psychology; or permission of the instructor.

This course examines the various aspects of parental influence on children's development, with a focus on cultural differences in parenting styles and practices. Topics to be covered include a critical evaluation of the conceptual and functional differences of parenting practices across cultures, and how these may influence children's development in diverse contexts. The notion of "good enough parenting" and parenting as a bi-directional process will be analysed. The course concludes with a discussion of whether parents are the most important source of influence, considering the many other domains of influence in children's lives, such as peers.

YSS4232 Advanced Topics in PPE: The Welfare State

Instructor: Ben Schupmann

Pre-requisite: YSC2121 Modern Social Thought; or permission of the instructor.

This module will challenge advanced students to connect the three main threads of the PPE major: politics, philosophy, and economics. To do so, we will analyse the historical development and the legitimacy of the Welfare State, which rose to predominance in the twentieth century. To understand its future, we will examine the myriad of challenges facing it today, including economic crises and interstate organizations. We will also consider how questions arising from the Welfare State bear on other values, especially democracy and the rule of law.

YSS4233 Populism and Democracy

Instructor: Philip Gorski

Pre-requisite: YSS2209 Anthropological Imagination or YSS2217 Political Concepts or YSS1206 Introduction to Comparative Politics; or with the permission of the instructor.

Co-requisite(s): YSS2209 Anthropological Imagination, YSS2217 Political Concepts, YSS1206 Introduction to Comparative Politics

Is populism good for democracy? This upper-level seminar will introduce advanced undergraduates to various theories of populism and to important cases of populism from around the globe. Countries considered will include France, India, Indonesia, Turkey, the United States, and Venezuela. Various explanations for the populist resurgence will also be considered, including: charismatic leadership, economic, inequality, party systems and new social media.

YSS4234 Urban Heritage: Place, Memory, Identity

Instructor: Creighton Connolly

Pre-requisite: YSS2220 Introduction to Urban Studies or YHU3276 The Historian's Craft; or with the permission of the instructor.

Co-requisite(s): YSS2220 Introduction to Urban Studies or YHU3276 The Historian's Craft

The course offers an advanced-level, in-depth understanding urban heritage, both as it manifests in the built environment but also in intangible social and cultural phenomena. The course begins by defining what heritage is in urban contexts, and inquiring into the special pressures urbanisation places on "inherited" built forms and ways of life. The course will tackle the following topics:

- The contested politics of whose past becomes heritage, and why?
- The relationship between urban heritage places, memory and identity
- Civil society interests and political activism
- Scholarly architectural debates about how to preserve the past: restoration, preservation, conservation, renewal etc (Ruskin et al)
- State-based processes of recognition and preservation
- International frameworks for conservation
- The tensions between heritage, tourism and authenticity

The module will draw on historical developments in urban heritage politics and planning in both North America and Europe, but the key emphasis will be on in-depth understanding of the emergence of urban heritage landscapes in Asian cities.

YSS4235 Religion and the Media Turn

Instructor: Neena Mahadev

Pre-requisite: Recommended but not required: YSS2227 Introduction to Anthropology, YSS2209 The Anthropological Imagination, or YSS3202 Ethnography.

How does media enable religious practitioners to experience the divine in the immediacy of the "here and now"? Prayer, liturgy, chanting, meditation, and acts of remembering to commune with higher powers, are acts that incorporate audio-visual technologies, t.v., radio, internet, religious texts, art, relics, icons, as well as so-called "idols" and "fetishes." Focusing on the intersection of religion and media, students will analyze "sensational forms," and religious conceptions of how to properly represent the divine ("semiotic theologies"). By examining media use of several religious communities around the world, the course highlights critical aspects of religious practice and religious difference.

YSS4236 Medical Anthropology: The Canon

Instructor: Marcia Inhorn

Pre-requisite: At least one 2000 or 3000 Anthropology course; or with the permission of the instructor.

The field of medical anthropology boasts a rich theoretical and empirical tradition, in which award-winning ethnographies have been written on topics ranging from local biology to structural violence. Guided by the key text, *Medical Anthropology at the Intersections: Histories, Activisms, and Futures*, this course will explore the canonical works of a number of leading medical anthropologists, including several whose research focuses on Asia (e.g., Das, Kleinman, Lock). Three key themes will be explored: 1) structural violence and social suffering; 2) technoscience and embodiment; and 3) medicine and humanitarianism.

YSS4237 Conquest, Territorial Expansion and International Law (no longer offered in Semester 2, AY2017/2018)

Instructor: Catherine Sanger

Pre-requisite: YSS2202 Introduction to International Relations; or with the permission of the instructor.

~~In this course, students will explore the root causes of state-led territorial expansion and the ramifications of conquest and domination for international law. We will analyse theories of conquest and delve into case studies of particular cases of expansion into inhabited territory (e.g. Japan's Co-Prosperity Sphere, United States' westward expansion across America, German expansion in Western and Eastern Europe) and state expansion into uninhabited frontiers (e.g. South China Sea disputes, airspace, outer space, Antarctica, the deep sea). Students will learn to analyse and critique competing arguments, synthesize explanatory lenses, and perform research into this arena of international politics and law.~~

YSS4238 Micro-Finance and Sustainable Development in Asia

Instructor: Markus Pauli

Pre-requisite: YSS3255 International Development or YSS3254 Globalisation on the Ground or YSS2218 International Political Economy or YSS2202 International Relations or YSS3225 Global Governance; or with the permission of the instructor.

What means *sustainable* development and how can it be *financed*? We investigate the changing visions, approaches, and experiences of development in Asia. We focus on the *political economy* and the *policies* leading to growth and its inequality and wellbeing impacts. We analyze the role of (international) state, business, and civil society actors. One illustration of such ideational and financial influences will be *micro-finance*. Awarded the *Nobel Prize* for its role in poverty alleviation and women's empowerment, it increasingly made negative headlines. Does micro-finance provide a feasible *market-driven* solution? How does globalization and liberalization influence other *new* approaches to sustainable development?

YSC1206 Conceptual Calculus

Instructor: Francesca Spagnuolo

Pre-requisite: None

An introduction to concepts of calculus, for students who may encounter calculus in science and economics courses. Topics include: the analysis of functions and qualitative interpretations of the derivative and definite integral; occurrences of derivatives and integrals in geometry, probability, and physics; the computation of derivatives and antiderivatives of simple functions; computing derivatives and antiderivatives of more complicated functions with the aid of a computer.

YSC1207 General Chemistry: Molecular Structure and Reactivity

Instructor: Genevieve Lau

Pre-requisite: YCC1131 Scientific Inquiry; or with the permission of the instructor.

Co-requisite(s): YCC1122 Quantitative Reasoning

An introduction to chemistry emphasizing a microscopic, physical approach. A focus on atomic and molecular structure, chemical bonding and reactivity, and physical properties of molecules. Includes laboratory exercises. For students with an interest in the physical sciences, the life sciences, and environmental studies. The material is discussed at an introductory level, and is focused on developing understanding and ability to apply molecular concepts in further study of the sciences.

YSC1212 Introduction to Computer Science

Instructor: Aquinas Hobor

Pre-requisite: None

Computer science has improved human life dramatically in the last 50 years. This course explains how computational tasks are solved and computers are programmed. You will learn how to be a more careful and methodical thinker. Moreover, millions of people around the world enjoy programming and you can too!

YSC1214 Networks

Instructor: Maurice Cheung

Pre-requisite: None

The main aim of the course is to introduce you to network thinking. How you could understand complex systems in the view of NETWORKS.

In this course, we will:

- explore the universe of technological, social, informational and biological networks around us
- learn the basic concepts and tools for understanding the properties of networks
- apply network science to gain insights in complex systems

YSC1215 Genetic Engineering for All: An iGEM team for Yale-NUS?

Instructor: Adeline Lin

Pre-requisite: None

Genetic engineering is the ability to manipulate DNA sequences to alter the characteristics of an organism. iGEM (international Genetically Engineered Machine) is an annual contest for students to use a toolkit of genetic elements, or additional elements of their own design, to create novel and useful biological systems. This module introduces students to the fundamentals of gene regulation and to the principles of genetic engineering. The kinds of things done by student groups in iGEM will be explored, and the possibility of a Yale-NUS iGEM team discussed. No prior knowledge or expertise is assumed.

YSC2202 Biology Laboratory

Instructor: Jan Gruber

Pre-requisite: None

This course introduces students to the basic techniques used in life science research. Students will pursue a semester-long project examining how genetic and molecular changes affect interactions between proteins. This course will recreate a research lab setting introducing standard molecular techniques and prepare students for independent work in research labs.

YSC2203 Classical Mechanics

Instructor: Shaffique Adam

Pre-requisite: YSC1121 Applied Calculus or equivalent; AND YSC1213 General Physics: Electronics and Non-Linear Dynamics; or with the permission of the instructor. Students are requested to consult with the instructor on the equivalency of the calculus course(s) that they have taken previously.

The course discusses the principles of classical mechanics within a rigorous mathematical framework. Topics may include kinematics, conservative forces, central-force motion, small oscillations, rigid bodies, variational problems, the Lagrangian and Hamiltonian formalisms, non-inertial frames, and special relativity. This course is a prerequisite for most of the Major modules in Physics.

~~**YSC2205 Mathematical Methods for Physical Scientists**~~ (**Note: Please note that YSC2205 Mathematical Methods for Physical Scientists has been retitled to “YSC3240 Foundations of Applied Mathematics” in Round Three**)

Instructor: Florin Diau

Pre-requisite: None

~~Mathematical Methods for Physical Scientists: This module introduces important mathematical methods that are essential for treating a variety of problems in the physical sciences. Topics could include vector calculus, linear algebra, differential equations, complex analysis, integral transforms, curvilinear coordinates, and calculus of variations. The module will focus on aspects of each topic pertinent to the physical sciences.~~

YSC2209 Proof

Instructor: David Smith

Pre-requisite: None

Mathematicians and computer scientists write proofs: convincing arguments, combining clear and concise language, computations and symbolic manipulation, illustrations and tables. By reading, writing, and revising proofs, students will be prepared for modern topics in analysis, algebra, geometry, and theoretical computer science. Students will write proofs that utilize direct deduction and proof by contradiction, complicated logical structures with cases, and mathematical induction. Students will acquire a thorough knowledge of naïve set theory, including sets and functions, equivalence relations and classes, cardinal and ordinal arithmetic. Topics in discrete mathematics will include the combinatorics of finite structures such as graphs and trees.

YSC2210 Data Analysis and Visualization (DAVis) with R

Instructor: Michael Gastner

Pre-requisite: YCC1122 Quantitative Reasoning; or with the permission of the instructor.

This course teaches how to use the programming language R for analyzing and presenting statistical data. Starting from the fundamentals of R (data types, flow control), students learn how to write their own R scripts and functions. They learn how to extract data from web sites and bring the input into a shape (e.g. using regular expressions) that is suitable for further analysis. Much of the course will focus on R's graphics features, including network representations and geographic maps. The objective is to present data in ways that are informative, elegant and fun (e.g. as short animated video clips).

YSC2212 Instrumental Analysis with Laboratory

Instructor: Stanislav Presolski

Pre-requisite: YSC1207 General Chemistry: Molecular Structure and Reactivity; or with the permission of the instructor.

Co-requisite: YSC1207 General Chemistry: Molecular Structure and Reactivity

This course is an introduction to the laboratory techniques in analytical and organic chemistry with an emphasis on the fundamental principles and utilisation of state-of-the-art instruments.

YSC2213 Discrete Mathematics

Instructor: Matthew Stamps

Pre-requisite: None

Discrete mathematics is the art of combining and arranging sets that are naturally composed of individual pieces, such as the integers, one's network of friends, or the internet. This course develops basic techniques for manipulating discrete sets through a host of concrete examples and applications. Key topics include permutations, partitions, recurrences, generating functions, networks, graph algorithms, and rigorous explorations of the Fibonacci and Catalan numbers, the Principle of Inclusion/Exclusion, the Pigeonhole Principle, and Pascal's Triangle.

YSC2215 Non-linearity

Instructor: Jon Berrick

Pre-requisite: None. Students taking this course may, but need not, take YSC2220 Linearity.

One striking way the computer has changed our understanding of the world is the (accidental) discovery that minute changes in initial conditions can lead to dramatic, qualitatively different changes to the outcome of a (non-linear) process – the so-called butterfly effect. This raises important issues such as qualitative versus quantitative, accuracy versus precision, determinism versus predictability, and reductionism versus emergence. Topics may include: strange attractors; power laws that govern the size and frequency of earthquakes, extinction of species and stock market crashes; the spottiness of leopards; origins of life on Earth – and elsewhere?

YSC2218 Survey of High Energy Physics Experiments

Instructor: Richard Breedon

Pre-requisite: None

Module will feature a survey of selected experiments and facilities related to research in high energy particle physics, both presently in operation (e.g., Large Hadron Collider, CMS, ATLAS, LHCb, Aegis, IceCube) and planned (e.g., LBNF, LZ). Following introductory lectures and problem sets, students will each be assigned 2 experiments about which they will make 20-30 min presentations on separate occasions. During Recess Week (24 Feb.–4 Mar. 2018) the class will visit the CERN laboratory in Geneva and participate in pedagogical tours of experiments at the LHC and Antimatter Factory.

YSC2220 Linearity

Instructor: Jon Berrick

Pre-requisite: YCC1122 Quantitative Reasoning; or with the permission of the instructor.

Co-requisite(s): Students taking this course may, but need not, take YSC2225 Non-linearity.

Many problems in the social and natural world involve transitions. For example, an economy's state this quarter leads to its condition next quarter. This module explores simple linear mathematical modelling to investigate such phenomena, study their extrapolation further into the future, and explore whether a steady state eventuates. It introduces students to matrices, and shows how their eigenvalues determine the ultimate fate of the balance of forces being studied. Students will gain an appreciation of how mathematics can unify approaches to very diverse problems. Only high-school mathematics, and probability from Quantitative Reasoning, is required background for the module.

YSC2221 Introduction to Python

Instructor: Alan Cheng & Simon Perrault

Pre-requisite: None

This course introduces Python, a widely used high-level programming language. Its popularity is comparable to Java or C/C++. This means Python is practically useful and convenient to program and learn, since there are many resources/communities on the internet and many supporting libraries. Python was designed to be easy to learn, though many serious applications have been built based on it.

YSC2228 Statistical Thermodynamics

Instructor: Kang Hway Chuan

Pre-requisite: YSC1207 General Chemistry: Molecular Structure and Reactivity and YSC1213 General Physics: Electronics and Non-Linear Dynamics; or with the permission of the instructor.

This is a first course in equilibrium statistical thermodynamics. It begins with examining the concepts of probability, microstates and macrostates in understanding thermal phenomena, linking these to entropy, the Boltzmann factor, ensembles, and the partition function. We apply these concepts to elementary physical and chemical models such as classical and quantum gases, solids, phase transitions, chemical reactions, solute-solvent interactions, polymer structure. Within the Physical Sciences major, it will count toward pathways in biophysics, chemistry, chemical physics, materials science, nanoscience, physics, or related fields.

YSC2229 Introductory Data Structures and Algorithms

Instructor: Olivier Danvy

Pre-requisite: YSC1212 Introduction to Computer Science; or with the permission of the instructor.

Preclusion(s): YSC2204 Fundamentals of Programming

We cover basic data structures and algorithms with an emphasis on implementation, although theory (asymptotic analysis, including amortization) is also covered. Topics include lists, queues, stacks, union-find, binary heaps, red-black trees, hash tables, tries, binary search, efficient quicksort, graph representations, depth-first and breadth-first search, topological sort, Dijkstra's, Prim's and Kruskal's, Huffman coding, and Knuth-Morris-Pratt. Additional topics may include:

- Randomization (e.g. Bloom filters, Miller-Rabin, Rabin-Karp)
- Time-space tradeoffs (e.g. range queries)
- Parallel considerations (e.g. Map/Reduce, prefix-sum, quicksort)
- Purely functional data structures (e.g. of red-black trees)
- Approximation algorithms (e.g. vertex covering)
- More sophisticated data structures and algorithms (e.g. leftist heaps, binomial heaps, splay trees)

YSC2230 Probability and Statistics

Instructor: Tim Wertz

Pre-requisite: YSC1211 Applied Calculus; or with the permission of the instructor.

Preclusion(s): YSC1204 Statistical Inference

In addition to being interesting in its own right, probability theory forms the foundation of the study of statistics and finds applications across the physical and social sciences. This course will provide students with a formal introduction to probability, with an eye to preparing them for further study in statistics and other fields of mathematics. We will return to topics first introduced in Quantitative Reasoning, but study them from a more mathematical point of view. Topics will include probability spaces, random variables, distributions, moment-generating functions, the Central Limit Theorem, likelihood functions, and an introduction to parameter estimation.

YSC3203 Advanced Algorithms and Data Structures

Instructor: Robby Tan

Pre-requisite: YSC2204 Fundamentals of Programming; or with the permission of the instructor.

Preclusion(s): Familiarity with basic algorithms and data structures including their rigorous analysis.

We study the design and rigorous analysis of algorithms and data structures. Topics may include dynamic programming, Fibonacci heaps, graph algorithms, string algorithms, parallel algorithms, and concurrent data structures.

YSC3205 Linear Algebra

Instructor: Tim Wertz

Pre-requisite: Any other MCS course; or with the permission of the instructor.

A rigorous first course in linear algebra of finite-dimensional real and complex vector spaces. The course covers vectors and linear transformations, building geometric intuition and algebraic aptitude. Topics include spaces and subspaces, linear maps, linear independence and spanning, basis, and representations by coordinates and matrices. The theory of linear operators is developed, including some development of canonical forms, eigenvalues and eigenvectors, characteristic and minimal polynomials. The course also covers the structure of bilinear and Hermitian forms. Other topics may include computational aspects of linear algebra and connections to statistics. Problems may include applications to scientific fields and economics.

YSC3208 Programming Language Design and Implementation

Instructor: Olivier Danvy

Pre-requisite: YSC2204 Fundamentals of Programming; or with the permission of the instructor.

Co-requisite(s): YSC3207 Principles and Tools of Software Development

We study the theory of programming languages and their implementation. Topics may include automata, semantics, verification, interpreters, compilers, and runtime systems. This course includes a substantial project.

YSC3213 Experimental Physics Laboratory

Instructor: Andrew Bettiol

Pre-requisite: Juniors and Senior students in Physics track major; or with the permission of the instructor.

Experimental physics will provide students with hands-on practical experience using techniques to investigate scientific problems that draw on concepts from different branches of physics (e.g. quantum, statistical, thermal, solid state and optical). It aims to enhance their understanding and apply scientific knowledge learnt in class. Emphasis will also be placed on the development of analytical skills in measurement and analysis.

YSC3214 Biochemistry

Instructor: Maurice Cheung

Pre-requisite: None

This course will provide a broad foundation to Biochemistry, the study of the chemistry of life. Students will learn about the chemical and molecular composition of a cell, the structures, functions and transformations of biomolecules and the flows of energy and information in biological systems at the biochemical level. This course will be particularly important for students intending to pursue further studies and/or future careers in medicine, veterinary, biomedical, pharmaceutical or forensic sciences and biotechnology.

~~YSC3216 Stochastic Processes and Models (no longer offered in Semester 2, AY2017/2018)~~

~~Instructor: Michael Gastner~~

~~**Pre-requisite:** YCC1122 Quantitative Reasoning and YSC1206 Conceptual Calculus or instructor's permission (will be granted if students have acquired equivalent knowledge of differentiation and integration)~~

~~What do (1) stock markets, (2) the weather, (3) genetic mutations and (4) the movements of a drunkard have in common? All four phenomena are subject to a certain degree of randomness. Such "stochastic processes" are a vibrant area of interdisciplinary research, ranging from mathematical finance over biology to predicting waiting times in supermarket queues. In this course, you will learn the mathematics behind the most common models of stochastic processes: Markov chains, Poisson and renewal processes, and queuing theory. We will prove the most important mathematical results and apply them to realistic problems.~~

YSC3221 Computer Vision and Deep Learning

Instructor: Robby Tan

Pre-requisite: Programming skill in Python, Knowledge in mathematics (linear algebra, calculus, probability/statistics), YSC3205 (Linear Algebra) or permission of instructor

Computer vision is Artificial Intelligence (AI) that focuses on images and video as the input. The goal of computer vision is to extract information from images and video. It attempts to make computers work like human's eyes; namely, to understand and recognize the world through visual data. Compared to other types of data, extracting information from images and video is more complex. However, it has been shown that DEEP LEARNING is effective in addressing this problem. Thus, in this course, we also learn deep learning, particularly in the context of solving computer vision problems.

YSC3222 Tobacco: A Social Policy Perspective

Instructor: Jon Berrick

Pre-requisite: None

This course helps students to develop skills to explore, analyse and formulate policy responses to complex social challenges. Focussing on arguably the most important single public health concern of our age, it introduces students to its manifold aspects – historical, social, psychological, medical, economic, legal and philosophical.

YSC3226 Designing Interactive Systems

Instructor: Simon Perrault

Pre-requisite: YSC2204 Fundamentals of Programming or YSC1202 Intro to Computational Thinking and Programming for All; or with the permission of the instructor.

A software or mobile application is nothing without a good interface. In this module, students will learn about user centred design and rapid prototyping.

In User Centered Design, the final user is involved in the creation process.

Rapid prototyping is a complementary approach in which the product will be quickly iterated and prototyped using different fidelities, from low (paper and cardboard prototypes, see Google Cardboard) to medium and high fidelity prototypes (3D printed/laser cut for physical devices or mockups). The module is project based and the final result will be a high fidelity prototype of an actual application or device.

~~YSC3228 Inorganic Chemistry with Laboratory (no longer offered in Semester 2, AY2017/2018)~~

~~Instructor: Chan Kiat Hwa~~

~~**Pre-requisite:** YSC2206 Principles of Organic Chemistry; or with the permission of the instructor.~~

~~The course aims to introduce the students to the principles of structure and reactivity of: 1) main group (including noble gases), 2) transition metal, and 3) rare earth metal compounds. The reactivity patterns of select classes of inorganic compounds and their relevance in the natural world (e.g. biological systems, atmosphere) will also be discussed.~~

YSC3238 Developmental Biology

Instructor: Antonia Monterio

Pre-requisite: YSC3233 Molecular Cell Biology; or with the permission of the instructor.

This course fulfils one of the upper division requirements for the Life Science Major. This course examines how cells and genes collaborate to establish multicellular organisms. The course will focus on vertebrate and invertebrate embryology emphasizing cellular, molecular, and genetic mechanisms. Topics include descriptive embryology, developmental control of gene expression, mechanisms of differentiation and morphogenesis, stem cells, and developmental genetics. The course will use modern molecular techniques and basic experimental results to describe how experiments address developmental questions.

YSC3239 Geometry and the Emergence of Perspective

Instructor: Matthew Stamps

Pre-requisite: None

This course explores the role of geometry in the emergence of perspective drawing during the Italian Renaissance. Through in-depth comparisons of seminal treatises such as Euclid's *Elements* and Leon Battista Alberti's *On Painting*, students will rediscover the crucial ideas that motivated the development of (non-Euclidean) projective geometry in seventeenth century Europe. No prior knowledge of geometry or familiarity with advanced mathematics is required.

YSC3240 Foundations of Applied Mathematics

Instructor: Florin Diau, Francesca Spagnuolo

Pre-requisite: None

Preclusion: YSC2205 Mathematical Methods for Physical Scientists

Foundations of Applied Mathematics introduces important mathematical methods that are essential for treating a variety of problems in applied mathematics, which are useful in physics, chemistry, and economics. Topics include vector calculus, linear algebra, differential equations, complex analysis, Fourier series, and calculus of variations. The module will focus on aspects of each topic pertinent to the applied fields mentioned above.

YSC4101 Physical Sciences Capstone Project

Instructor: -

Pre-requisite: Completion of all Year 1 and 2 Common Curriculum Modules; or with the permission of the instructor.

The Physical Sciences Capstone Project is a year-long 10-MC module, straddling over two semesters. It is a compulsory module that students in the Physical Sciences major must complete in order to graduate. It allows students the opportunity to pursue, in depth, an advanced project of their own choosing, while working closely with a faculty supervisor. Students will work on an advanced creative and/or research or experiential project that integrates skills from the Common Curriculum and learning in the major. The Capstone Project will culminate in a substantial piece of work that reflects a deep engagement with the topic.

YSC4102 Life Sciences Capstone Project

Instructor: -

Pre-requisite: Completion of all Year 1 and 2 Common Curriculum Modules; or with the permission of the instructor.

The Life Sciences Capstone Project is a year-long 10-MC module, straddling over two semesters. It is a compulsory module that students in the Life Sciences major must complete in order to graduate. It allows students the opportunity to pursue, in depth, an advanced project of their own choosing, while working closely with a faculty supervisor. Students will work on an advanced creative and/or research or experiential project that integrates skills from the Common Curriculum and learning in the major. The Capstone Project will culminate in a substantial piece of work that reflects a deep engagement with the topic.

YSC4103 Maths, Computational & Statistical Sciences Capstone Project

Instructor: David Smith

Pre-requisite: Completion of all Year 1 and 2 Common Curriculum Modules; or with the permission of the instructor.

The Maths, Computational & Statistical Sci (MCS) Capstone Project is a year-long 10-MC module, straddling over two semesters. It is a compulsory module that students in the MCS major must complete in order to graduate. It allows students the opportunity to pursue, in depth, an advanced project of their own choosing, while working closely with a faculty supervisor. Students will work on an advanced creative and/or research or experiential project that integrates skills from the Common Curriculum and learning in the major. The Capstone Project will culminate in a substantial piece of work that reflects a deep engagement with the topic.

YSC4205 Organometallic Chemistry

Instructor: Chan Kiat Hwa

Pre-requisite: YSC2206 Principles of Organic Chemistry or with permission of the instructor

Principles of structure and reactivity of transition metal containing organometallic compounds. Homogeneous catalytic chemistry, synthesis of organometallic compounds, mechanisms of organometallic reaction chemistry.

YSC4210 Complex Analysis

Instructor: Florin Diau, Chan Heng Huat

Pre-requisite: YSC3206 One Real Variable or YSC3206 Introduction to Real Analysis; or with the permission of the instructor.

This course deals with the theory of functions of a complex variable. The topics to be covered are the Cauchy-Riemann equations and power series, the properties of analytic and entire functions, such as the maximum-modulus principle and the open mapping theorem, line and contour integrals, the residue theorem, and conformal mappings. If time permits, the analytic continuation as well as the gamma and zeta functions will be also treated.

YSC4211 Advanced Topics in Molecular, Cellular and Developmental Biology

Instructor: Nicholas Tolwinski

Pre-requisite: At least one required: YSC3233 Molecular Cell Biology OR YSC3238 Developmental Biology, Genetics OR YSC3214 Biochemistry OR With the permission of the instructor

This course fulfils one of the upper division requirements for the Life Science Major.

This course aims to be an advanced research seminar examining the latest findings in Molecular, Cellular and Developmental Biology. The focus will be on analysis of primary literature. Students will work on scientific writing and presentation.

Independent Reading and Research (IRR)

YIR3311 / YIR3312 / YIR3313 / YIR3311G / YIR3312G / YIR3313G Independent Reading and Research – 2MC

Independent study in an area of special interest to the student(s), with the close guidance of a faculty member, leading to a final project/product.

In consultation with a faculty member, a student or students should craft a proposal outlining the nature of the project and the work s/he intends to finish during the semester. This option is intended for an individual or small group of students – ordinarily 1-2 students are expected to participate per project. Faculty can recommend projects to students, but the proposal as such should come from the students. Projects can be reading intensive or practical (lab, field or studio work). The student(s) and faculty member should plan to meet at least once a week and the student should expect to spend the equivalent of 5 hours/week for a full semester on the project. As its name suggests, the proposal must have at its core the student(s) engaging primarily in *independent* study nature.

Please fill in the 2MC Independent Reading and Research form if you wish to apply. The form can be found on ourCORS website here: <https://ourcours.yale-nus.edu.sg/>

Special Project in Science (SPS)

YSC4200 / YSC4200G Special Project in Science – 5MC

*This module provides academic credit of major research projects conducted by students prior to the Capstone project. This is an individual project to allow students with extraordinarily strong preparation to receive academic credit for research conducted at the level of a capstone project prior to the fourth year. This module is **not** substitute for the capstone project, and it does **not** in general provide credit toward the major.*

A student wishing to elect **YSC4200 Special Project in Science** should not be engaged or intend to be engaged in any forms of paid or unpaid internship or research work relating **to this module**. In consultation with a faculty member, the student should craft a proposal outlining the nature of the project and the work he/she intends to finish during the semester. The project can be reading intensive or practical (lab, field or studio work). The student and faculty member should plan to meet at least once a week and the student is expected to spend the equivalent of 12.5 hours/week for a full semester on the project.

Please fill in the 5MC Special Project in Science form if you wish to apply. The form can be found on ourCORS website here: <https://ourcours.yale-nus.edu.sg/>

Independent Language Study and Research

YIR3411 / YIR3412 / YIR3411G / YIR3412G Independent Language Study and Research - 2MC

This module is intended for an individual or small group of students – ordinarily 1-2 students– who would like to work with texts and other materials in a language other than English. Students should clearly articulate the goals of their project and what they aim to achieve by the end of the semester.

Independent Language Study and Research projects should go beyond reading the assigned materials from another module in their original language.

Rationale for the Module: To provide a way for students to do research in a language other than English either as a complement to an existing module or by itself. This option may be appealing to junior and seniors doing exploratory work for their capstone projects. It will also be of interest to advanced students in a particular language as a way to explore topics of particular interest to them.

Students will submit a project proposal similar to the current method for 2MC Independent Reading and Research modules.

Please fill in the 2MC Independent Language Study and Research form if you wish to apply. The form can be found on ourCORS website here: <https://ourcours.yale-nus.edu.sg/>