Capstone Project

Guidelines & Regulations

AY2017/2018
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1. **Mission/objectives of capstone**

The Yale-NUS curriculum culminates in an original capstone project which all students undertake with the guidance of Yale-NUS faculty and other subject matter experts. In the capstone program, students hone the disciplinary and general intellectual skills necessary to conceive, design and execute a year-long, self-directed project within their major. The program requires every student to engage with research in their discipline, to produce scholarship across appropriate formats, and to communicate their results to a variety of audiences. By completing their capstone work, students demonstrate independence, creativity and critical analysis.

2. **Format**

The Capstone Project is a two-semester module worth a total of 10 MC’s over the last year of the 4-year course. 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.

3. **Selection and scope of project**

Faculty can make suggestions based on identified student interest, or circulate a few topics of interest that students could take or adapt. Students can also suggest their own topics – the most appropriate means for determining topics will vary from major to major. The Capstone project may be part of a larger effort being undertaken by the faculty supervisor and others, but the Capstone itself must be clearly identified as a separate intellectual entity within that broader project.

Students are strongly encouraged to choose a topic which they find compelling and in which they may have some competence based on prior academic work, professional experience, or exploration of future career options. While there will be a supervisor who is a domain expert to be a guide, the students will work largely on their own.

As the Capstone Project is equivalent to a 10 MC module, students should plan and supervisors should expect the student to spend at least as much time and energy on the Capstone Project as would be devoted to one 5 MC module per semester. We note that the formal definition of a 5MC module entails 12.5 hours of work per week. While workloads may vary between projects.
and within a project as it develops, projects that require either substantially more or substantially less effort than is suggested by this workload should be restructured. Both students and supervisors are responsible for keeping the Capstone project to an appropriate scope.

4. Definitions and responsibilities

4.1 Head of Studies/Designate/Capstone Coordinator
Any reference to “Head of Studies” will mean the Head of Studies OR the person designated by the Head of Studies to undertake his/her responsibilities OR another faculty who is identified as the Capstone Coordinator for that major. The Head of Studies will submit all the capstone project proposals from his/her major to Registry at the end of Week 6, Semester 1. He/She is responsible for approving external supervisors and appointing co-supervisors; collecting feedback from the students at the end of Semesters 1 and 2; resolving any dispute or problems related to the capstone project; submitting the progress report form to Registry at the end of Semester 1; designing the assessment rubric for the major; collating all the students’ final grades to be submitted to Registry; mediating any other issues as outlined in this document.

4.2 Supervisors and co-supervisors
Every capstone project must have a supervisor who is typically a faculty member in Yale-NUS College. With the approval of the Head of Studies, the supervisor may be from outside Yale-NUS. In this case, the student will be assigned a separate faculty member from Yale-NUS to serve as Co-supervisor.

For DDP Law and Liberal Arts students: The Supervisor may be from the Faculty of Law. If so, a Co-supervisor from Yale-NUS College will be appointed. If your Supervisor is from Yale-NUS College, a Co-supervisor from the Faculty of Law will be appointed.

4.3 Responsibilities of the supervisor
The supervisor will work with the student from the beginning till the end of the project. He/she will help the student refine the project goals and objectives as well as set up a timeline to help the student stay on track. The supervisor should guide the student through the project by answering questions, suggesting avenues to investigate, commenting on the current state and progress of the project, and assisting with relevant resources applicable to the project. Together
with another examiner, the supervisor is also responsible for assessing the capstone module and giving the final grade.

4.4 Responsibilities of the co-supervisor
If the supervisor is not a Yale-NUS faculty, then the internal Yale-NUS co-supervisor will keep in contact with the external supervisor and the student on a periodic basis to ensure that the external supervisor is meeting his/her responsibilities toward the student and that the student is making satisfactory progress on the project.

4.5 Responsibilities of the student
The student should work closely with the supervisor to ensure that the goals and objectives of the project are clear and that the timeline to achieve them is reasonable. As research projects are, by definition, journeys into the unknown, failure to achieve a specific result will not necessarily count against the student BUT any demonstrable lack of effort certainly will.

4.6 Process for Resolution of disputes/problems
If any dispute or problem arises, the Head of Studies should be informed as soon as possible so that it can be resolved. If resolution by the Head of Studies is not possible, then the Divisional Directors should get involved and, if necessary, set up a 3-faculty panel to resolve the dispute/problem. If there are further questions about the dispute/problem then the Associate Dean of Faculty will be consulted. In all such circumstances, the interests of the student should be paramount and the dispute/problem should be resolved speedily.

5. Project framework and guidelines
   a) Students may start discussions with the HOS and potential supervisors in advance. However formal enrolment in the Capstone Project module takes place at the beginning of Year 4, prior to the end of the second week.
   b) The supervisor is a faculty member of Yale-NUS or someone approved by the Head of Studies. If the supervisor is external to Yale-NUS, a faculty member of Yale-NUS will be appointed as co-supervisor.
   c) At the end of Semester 1, supervisors will give students feedback on their progress. Both the student and the supervisor will submit a brief description of progress made so far. Each major can decide on the format of this Semester 1 report although a suggested format is also available. A grade of IP will be recorded based on the supervisor’s
endorsement and an assessment determined by the Head of Studies which will then be submitted to Registry. Students who have not made satisfactory progress should be advised by the supervisor and Head of Studies on steps to take in Semester 2 to fulfil the requirements of the project.

d) Depending on the design of the project, students will submit a formal thesis or some other piece(s) of work in the second semester.

e) Depending on the major and project, viva voce style presentations may take different forms and be graded as determined by the supervisor and Head of Studies. If these are required, then they should be completed before the end of Week 13 in Semester 2.

f) Grading of the final project will be done by the supervisor and another examiner independently and the final grade will be the average of the two grades or as mutually determined by the supervisor and examiner. If the two grades differ by more than two grade steps or a mutually satisfactory grade cannot be determined, a third examiner will be appointed by the Head of Studies (or the Divisional Director, if the HOS is the original supervisor/examiner) to assess the project and determine the final grade in consultation with the Divisional Director or HOS.

g) The format used for the overall grading of the capstone project will be designed by each major but should be recorded on forms to be submitted to the Head of Studies who will be responsible for collating all the grades and determining all the students’ final grades to be submitted to Registry.

h) Where necessary, the supervisor is responsible for ensuring that the project follows the College’s guidelines on ethical standards of research for undergraduates.

i) Policy on Failure – Any student who receives a final grade of D in the Capstone project will have to satisfactorily complete a remediation process to be confirmed by the supervisor and Head of Studies before the student is allowed to graduate. Upon successful remediation, the grade will be changed to a C. Remediation will be undertaken during the long vacation under the supervision of the supervisor and the final remediation report/thesis submitted by the end of the third week of June so that the decision on the remediation is available by mid-July. Any student who receives a final grade of F or fails the remediation will have to re-do the whole capstone project before being allowed to graduate. Such students will re-enrol for one more semester at the College and register for the Repeat Capstone module by Week 2 of Semester 1 or Semester 2 if the student decides to take a leave of absence for one semester before re-enrolling. The Repeat Capstone module will also carry 10MC’s but has to be completed within the one semester
and the student will be working on the project full-time. The deadline for submission of the final report/thesis will be Week 11 of the Semester and grading procedures will be the same as for the normal Capstone project.

j) Late submission policy – Any final thesis/report that is submitted after the end of Week 11 of Semester 2 will be subject to penalties as described in the Submission of Capstone Report Guidelines document (link). However, students with Vice-rectors’ notes, which are given for medical reasons, will not receive any grade penalty. Where there are other extenuating circumstances as recognized by the Head of Studies, the penalties will not apply until the agreed period of extension has been exceeded.

k) Academic integrity – Students should conduct all work on the capstone project according to the policy on academic integrity that is part of the academic regulations of the College. Any violation of the academic integrity policy will be subject to the disciplinary policies and procedures of the College and may result in required remediation of the project prior to graduation.

l) The year-long Capstone module is offered in Semester 1 of each Academic Year for all majors. In order not to be out of sequence for the capstone module, it is highly recommended that all capstone projects should be completed within Semester 1 and 2 of any academic year. In the event that a student has taken a leave of absence in a previous semester and will be scheduled to graduate one semester later than the students of the admitted cohort (at the end of Semester 1 of the following AY instead of Semester 2 of the current AY), the student will still register for the capstone project in August (Semester 1) of his/her penultimate year so that the project can be completed the following April/May (Semester 2). After which, the student will continue for one more semester in the following August (Semester 1) in order to take additional modules required to graduate. Students in such circumstances will need to propose an academic plan at least three weeks (start of Round 3 of the Module Registration Exercise) before the start of Semester 1 of his/her penultimate year supported by the HOS and approved by the Capstone Committee. However, if for some extenuating reasons, a student is unable to register the capstone project in Semester 1 and is requesting for an out of sequence registration to register the capstone project in Semester 2, the student must indicate in the academic plan with substantive reasons for why the student cannot start in Semester 1 of the penultimate year. All requests must be submitted to the HOS and will be considered by the Capstone Committee that adjudicates such exceptions at the beginning of Semester 1. The decision made by the Capstone Committee will be final.
6. **Timeline**

Each Head of Studies is responsible for preparing and ensuring that their students meet the following deadlines for the items listed in Table 1 that need to be submitted to Registry. All supervisors will submit Semester 1 Progress reports to the Head of Studies. Students will submit Semester 1 and Semester 2 feedback forms online. This feedback will be kept confidential with the Divisional Director, but the Divisional Director will have prerogative to discuss relevant content with the Head of Study and/or Supervisor.

In Semester 2, the final report of the capstone is due on the Friday of Week 11 and all other assessed activities (e.g. viva voce exams, exhibits and poster sessions, etc.) should be completed by the end of Week 13.

**Table 1 Deadlines for Submission**

<table>
<thead>
<tr>
<th>Description</th>
<th>Submission by</th>
<th>Submission to</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Capstone Project Proposal Form</td>
<td>HOS</td>
<td>Registry</td>
<td>Sem 1, Week 6 Fri, 22 Sept 2017</td>
</tr>
<tr>
<td>2. Capstone Registration List</td>
<td>HOS</td>
<td>Registry</td>
<td>Sem 1, Week 6 Fri, 22 Sept 2017</td>
</tr>
<tr>
<td>3. Capstone Funding Application Form</td>
<td>Student</td>
<td>Divisional Offices</td>
<td>Sem 1, Week 7 Fri, 6 Oct 2017</td>
</tr>
<tr>
<td>4. End-Semester 1 Capstone Evaluation</td>
<td>Student</td>
<td>Online</td>
<td>Sem 1, Week 13 Sun, 19 Nov 2017</td>
</tr>
<tr>
<td>5. End-Semester 1 Capstone Progress Form</td>
<td>HOS</td>
<td>Registry</td>
<td>Sem 1, Week 15 Fri, 1 Dec 2017</td>
</tr>
<tr>
<td>6. End-Semester 1 Progress Report</td>
<td>HOS</td>
<td>Registry</td>
<td>Sem 1, Week 15 Fri, 1 Dec 2017</td>
</tr>
<tr>
<td>7. Capstone Registration List (with names of 2nd Examiners and, if necessary, updated Capstone project titles)</td>
<td>HOS</td>
<td>Registry</td>
<td>Sem 2, Week 7 Fri, 9 Mar 2018</td>
</tr>
<tr>
<td>8. Capstone Final Report</td>
<td>Student</td>
<td>Electronic Submission</td>
<td>Sem 2, Week 11 5pm, Fri, 6 Apr 2018</td>
</tr>
<tr>
<td>9. Request for Payment Form</td>
<td>Student</td>
<td>Divisional Offices</td>
<td>Sem 2, Week 12 Fri, 13 Apr 2018</td>
</tr>
<tr>
<td>10. Capstone End of Year Student Feedback Form</td>
<td>Student</td>
<td>Online</td>
<td>Sem 2, Week 12 Sun, 15 Apr 2018</td>
</tr>
<tr>
<td>11. Completion of Oral Presentations (if any)</td>
<td>-</td>
<td>-</td>
<td>Sem 2, Week 13 20 April 2018</td>
</tr>
<tr>
<td>12. HoS determines the final capstone grade for all students in the major.</td>
<td>-</td>
<td>-</td>
<td>Sem 2, Week 14 27 April 2018</td>
</tr>
<tr>
<td>13. Capstone Final Assessment Form</td>
<td>HOS</td>
<td>Registry</td>
<td>Sem 2, Week 15 Wed, 2 May 2018</td>
</tr>
<tr>
<td>14. Final Grade Submission Form</td>
<td>HOS</td>
<td>Registry</td>
<td>Sem 2, Week 15 Wed, 2 May 2018</td>
</tr>
<tr>
<td>15. Best Capstone Award Nomination Form</td>
<td>HOS</td>
<td>Registry</td>
<td>Sem 2, Week 15 Wed, 2 May 2018</td>
</tr>
</tbody>
</table>

7. **Presentation of capstone work in the Residential Colleges**

As students progress through their college years, they move from a tight bond with their year cohort in the residential college as freshmen, to broader associations with people from different
colleges and years through their activities with various affinity groups and their majors. In their final year as seniors it is both satisfying and useful to recover those connections of their original class cohort bond, a kind of return to the grounding elements of their first year, prior to their collective launch into post-college life.

As all Yale-NUS students have to work on a capstone project, one way to engineer and rediscover this cohort reconnection is for seniors to present their research to their year cohort within their colleges. We imagine a series of evenings over the course of the latter part of the first semester and through the second semester in a student’s senior year, whereby seniors gather each week for dinner or some refreshment with their rectors and vice-rectors or designates. These evenings would be organized by the Rectors and the RC staff. Over the course of each session, four or five seniors present their work. Those students presenting would be allowed to invite their advisors and friends to hear the presentations and join with the group for their meal.

These presentations would serve two major purposes: to help hone the presentational elements of student capstone projects and to help recreate cohort connection in order to enhance the development of the alumni cohort. They would not be required or graded. Instead the individual majors that do want formal or graded student presentations, should have their students present a viva voce at the end of the year in a controlled group session with all students presenting the final versions of their projects. It is these presentations that could be assessed and graded.

8. Administration, policies and procedures

Details for each major are in Appendix 1.

9. Grading

At the end of Semester 1, a grade of IP will be recorded based on an assessment by the supervisor. Depending on the design of the project, students will submit a formal thesis or other written work at the end of Semester 2 and will generally make a presentation or exhibit of some kind, the nature of which will be determined by the individual major. The final project will be assessed by the supervisor and another examiner, and the overall grading of the Capstone
module will be as defined by the major as presented in the description of the Capstones of the individual major. The final grade will be submitted to the Registry by the Head of Studies.

10. Funding/resources
Students can make use of all the resources available from ERT and other resources available within Yale-NUS College. Each Capstone project will have a small amount of money (SGD 50) which will be reimbursed upon presentation of receipts. Majors can petition the Dean of Faculty to increase this standard amount for each student for particular kinds of Capstones that have specific needs (e.g. lab or studio art-based or field-based Capstones). Individual Capstones can also petition to the Dean of Faculty for specific resources once the capstone proposal has been submitted. Guidelines for the application and use of this funding are available at: link.

10.1 External Support
External support or funding must be declared to the Heads of Studies and is subject to further approval.

11. Student preparation
Each major will have individualized preparation requirements and these should be shared with students in Year 3.

12. Supervisor preparation
All supervisors are reminded that the Capstone Project is only equivalent to a 10 MC module. Therefore, students should plan and supervisors should expect the student to spend as much time and energy on the Capstone Project as would be devoted to one 5 MC module per semester. Both students and supervisors should keep the Capstone project within a limited and realistic scope.

For the preparation of supervisors, the Centre for Teaching and Learning at Yale-NUS College and the Dean of Faculty Office will sponsor workshops on effective supervision of capstone projects in Semester 2.
13. **Prizes for completed projects**
Prizes may be awarded for the best capstone project in each major. The highest scoring projects will be considered by the Head of Studies and faculty. One (maximum of two) capstone project(s) may be chosen based on scholarly merit, originality and contribution to the field of study.

14. **Feedback and Evaluation**
Students will be requested to share their feedback and evaluation of the Capstone Project at the end of Semesters 1 and 2. Heads of Studies will also discuss the capstone projects with the supervisors in their major to share good practices and avoid difficulties/challenges that might have occurred in the past year. Additionally, post-graduation, students will also be requested to give feedback on the impact of their capstone project experience on their career or further studies.

15. **Appendix 1 – details of each major (softcopies)**

*Double-click icons to access softcopies*

- Anthropology Capstone Description.docx
- Arts and Humanities Capstone Description.docx
- Economics Capstone Description.docx
- ES Capstone Description.docx
- Global Affairs Capstone Description.docx
- History Capstone Template.docx
- Law and Liberal Arts DDP Capstone.docx
- Life Sciences Capstone Description.docx
- Literature Capstone Description.docx
- MCS Capstone Description.docx
- Philosophy Capstone Description.docx
- Physical Sciences Capstone template.docx
- PPE Capstone Description.docx
- Psychology Capstone Description.docx
- Urban Studies Capstone Description.docx
15.1 Anthropology

Description of Capstone (AY2017/2018) - ANTHROPOLOGY

Identification of project and supervisor:
Students should begin to think about capstone projects during Year 3 (or earlier). By Week 10 of Semester 2, Year 3, students are strongly encouraged to let the HCS know about their preliminary capstone topics and prospective capstone supervisors. Ideally, the preliminary topic should be approved by the HoS and the capstone supervisor before Week 12 (Sem 2 Year 3). Students may revise and change their topics only until Week 2 of Semester 1, Year 4.

Range of topics and formats:
Anthropology capstone projects may be based on experiential and field research utilizing ethnographic or other methods, or they can be based on published or unpublished texts, archival, historical, visual, linguistic, musical or other materials. They could, for example, involve folklore or museum studies, oral history, historical analysis of anthropological writings, archival work, interviews and/or field research or a combination of qualitative and quantitative methods. They will all include some written component, but may involve other appropriate formats including, sound recordings, visual media, virtual demonstrations, material culture exhibits, etc., or a combination of the above.

Activities as part of project:
All students will enroll in the Sem1 Capstone course, which meets every other week. Under the direction of the Capstone course director, the student will develop a formal prospectus, timeline, and bibliography, and carry out the research component of the project in consultation with the supervisor and HCS. The project may build on and develop a project from year 3, study abroad, summer research, ongoing research conducted in Sem1, Year 4, or another course. The final product may elaborate and develop an earlier project. By Sem1 week 11, all majors will meet as a group with supervisors and capstone director/HoS and present their research in progress. During the Sem2 capstone seminar, students will meet as a class on a weekly basis. By this time, students should be writing their capstone papers. They will make seminar presentations of their projects and papers in progress, which will be pre-circulated for peer editing and discussion. Students are highly encouraged to have drafts of their papers written as early as possible in Sem2, for the purposes of this peer editing and capstone finalization process. The final project – regardless of its initial form as an exhibit, film, paper etc. – will take the form of a written ‘Capstone Report’ (max 10,000 words) that is intended to demonstrate the student’s ability to think broadly and critically about his/her particular anthropological project and about anthropology in general. In the case of students who have done ethnographic or archival research, the Capstone Report will likely take the form of an academic research paper. In the case of other sorts of projects (e.g., exhibitions or ethnographic films) the report may be a shorter analysis or reflection on the project and its anthropological significance. Students will present their work in seminar, and to a wider public audience of supervisors, other students, and faculty (and family members, if relevant). A draft of the Capstone Report is typically due by Sem 2 Week 6, and a final version is due no later than Week 11.

Preparation of students:
Students are strongly recommended to have completed the methods and theory requirement for the major during year three or earlier. Those who have not must be enrolled in these courses during Sem1 of year 4.

Expectations for students/supervisor interactions and work on the project:
Students should be in regular contact with their supervisors, who have been assigned to students in year 3. During year 4, students will provide a brief written progress report every two weeks, or as required by the supervisor. The supervisor and Capstone course director/HoS will be in communication with the student about the progress of the capstone project over the course of year 4.

Format(s) of final product:
The final Capstone Report is typically no more than 10,000 words, excluding references (approximately 30-40 double-spaced manuscript pages).

Assessment:
For their final grade for the capstone (at the end of Semester 2), they will be assessed as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timely and satisfactory completion of Semester 1 research project (as determined by capstone supervisor and Seminar 1 leader)</td>
<td>20%</td>
</tr>
<tr>
<td>Final capstone report (evaluated by capstone supervisor and second reader)</td>
<td>60%</td>
</tr>
</tbody>
</table>

The final capstone project will be assessed independently by the student’s capstone supervisor and another examiner, and the final grade will be a grade that is mutually decided upon by the two readers.
15.2 Arts and Humanities

Description of Capstone (AY2017-18) – ARTS AND HUMANITIES

Identification of project and supervisor:

Students are encouraged to begin thinking about their capstone project in the second Semester of their third year. Students will make an initial brief proposal of their thesis or area of focus by mid-April for review by the Arts and Humanities faculty. Students who are abroad can contact the HoS with a short paragraph outline. Feedback will be provided and a supervisor will be indicated. A proposal will be completed in week 2 of Semester 1 of their fourth year in consultation with college faculty.

Range of topics and formats:

The Arts and Humanities Capstone will involve the development of a complete body of individual work. This project may involve the creation of texts, a portfolio of artworks, a dramatic event, musical composition, a project involving original research, or comparative and analytical work, including findings from a fresh approach to a specific topic or area of study in the arts.

Activities as part of project:

The project will begin with a sustained and rigorous period of research. Students must demonstrate a thorough contextual knowledge of their developing topic. There will be first drafts, prototypes, rough edits, drawings, compositions, or production timelines. Students will use analysis, comparison, creative methodologies and focused work. Students will maintain a portfolio/notebook to record their self-reflexive insights and assessment of the developing project.

Work in Progress Seminar September/October/November - There will be a weekly Seminar for discussion and presentation of work, in which students will outline the creative process intrinsic to their own developing project and contribute to the critical discussion of the work of others. There will be a rolling roster of one faculty and relevant thematic presentations by faculty and external speakers. There will be a strong student involvement in the facilitation of the weekly seminar.

Week 6 Proposal - In Week 6 a more detailed proposal will be submitted containing an abstract, a question, a topic, a theme, a timeline, an indication of collaborative aspects, resource dependencies, and significant targets.

Seminar January/February/March - There will be thematic presentations relevant to the completion of capstone projects. Students will continue to maintain a Portfolio/Notebook of reflexive insights and self-assessment. Students will meet regularly for discussion of their developing works and the work of others. These will be student led discussions, focusing on the creative process and issues of preparing a senior project as well as any themes, events, prototypes, rehearsals and activities that are relevant to the group of students in the major as they move towards completion of their projects.

Activities as part of project:

Not applicable.

Expectations for student/supervisor interactions and work on the project:

All students are expected to meet with their supervisors at least twice per month, with the student providing a summary of recent activities and progress to the supervisor at least 48 hours prior to the meeting. Practical students are expected to work for at least 10 hours each week.

Format(s) of final product:

Scholarly projects should result in a thesis of 6000-10000 words that includes Abstract, Introduction, Materials and Methods, Results, Discussion, and an annotated Bibliography. Practical projects should result in a finished body of work and a reflective piece of 2000-3000 words, which should include evidence of the creative process and contextual factors that have influenced the work of the student.

Assessment:

At the end of the first semester, the students Week six proposal, portfolio/notebook, seminar participation, and body of research will be assessed and a grade will be given which will be worth 20% of the overall Capstone project grade. An IP-in progress is entered if satisfactory progress is being made in the capstone project overall. As part of the mid-point assessment students will complete a self-assessment sheet for discussion. The final assessment of the students' scholarly or practice-based project will be conducted by the supervisor and another faculty. This combined with their reflective piece is worth 80% of the final grade.
15.3 Economics

Description of Capstone (AY2017/2018) – ECONOMICS

Identification of project and supervisor: Students may choose from almost any topic in economics that is of interest to them, subject to the approval of the Capstone Module Coordinators (CMCs) supervising the research seminar and the assigned capstone supervisor. In the first semester, all students are expected to attend the weekly capstone research seminars which is intended to help develop the capstone research project. By week 3 of the first semester, each student will be matched with an economics faculty member as their Capstone Supervisor.

Range of topics and formats:
The capstone provides students with the opportunity to conduct an independent feasible research project in economics under the guidance of the CMC and the project supervisor. This project is intended to be an original contribution in economics. There are two types of capstone research projects.

Theory papers answer a question with the aid of a mathematical model. The model simplifies perhaps unrealistic assumptions and identifies all the relevant economic forces in the problem. The model becomes a vessel by which we hone our economic intuition and understand the qualitative nature of the economic forces at play. Empirical papers answer a question using either observed or experimental data. Either with or without the aid of a model, empirical papers justify a possible explanation for the joint realization of the multiple variables in the observed data. This paper outlines detailed examination of the data and empirical strategies to uncover the relationship or possible explanation for the data. Students are not restricted to only using techniques already developed through coursework. New methodologies that can be mastered within the available two semesters may also be employed. A feasible research project is one that can be completed in the two semesters research period, using data that is accessible and techniques that can be mastered within the available time period. It is up to the discretion of the CMC and the supervisor to decide if a project is feasible.

The final submission should clearly articulate the research question, why it is interesting to readers, describe the relevant literature and its contribution. In empirical projects, students are expected to come up with empirical strategies to answer the research question. In applied theory projects, students are expected to develop and solve a model that answers the research question.

Activities as part of project: There are two parts to the research project:

Semester 1: Students are expected to attend and participate in the Research Seminar organised by the CMCs. The CMCs will present a series of workshops on research methods – which includes how to proceed with research projects, tips on finding and using data, tips on using research resources, and a discussion of academic writing (plagiarism, citation, etc.). Each student will also be expected to give at least two presentations in Semester 1 on their research project. This provides students with the opportunity to discuss and fine-tune their research idea and strategies. It also shows students in the audience how a research project develops and matures which would be helpful when working on their own research project. Students are also expected to make two written submissions in Semester 1.

i) A two-page draft of the research proposal will be due in week 5.
ii) Building on the earlier draft, an extended 5-page research proposal is due on week 10.

The format of these submissions will be further discussed in the Research Seminars.

Except in extenuating circumstances, students are not allowed to change their research topic after week 10 of Semester 1.

Semester 2: Together with the help of their supervisor, students will continue to build and develop their proposal culminating in both a written paper and a presentation of their research results.

Preparation of students: Not applicable

Expectations for students/supervisor interactions and work on the project: Students should meet with their capstone supervisor at least twice per month during the semester, with the student providing a summary of recent activities and progress to the supervisor at least 48 hours prior to the meeting. The capstone research project is meant to be an independent piece of student research. Supervisors are not expected or allowed to conduct the research itself or outline how the research should be done. Capstone supervisors responsibilities are to help and guide student in their research project.

Format(s) of final product: All students will submit a research paper, complete with an abstract, title, introduction, conclusion and annotated bibliography. Other paper sections may include model, data description, and results as appropriate for the topic studied. The paper should be between 5,000 and 10,000 words. This upper limit should not be treated as a target as the paper will be graded based on its execution, not on its length. All students conducting empirical work will submit their data and their Stata do-files to their supervisor with their final paper.

Assessment(s): In semester 1, the student will be assessed on their proposal 15% (written submission 10%, and presentation and participation 5%). In semester 2, the student will be assessed on their final oral presentation 10%, and final paper 75%.
15.4 Environmental Studies

Description of Capstone (AY2017/2018) – ENVIRONMENTAL STUDIES

Identification of project and supervisor

Capstone projects in Environmental Studies are an important component of a student’s area of specialization, and hence must be consistent with and build upon the student’s previously approved area-of-specialization statement. Students are encouraged to begin conceptualising their projects as early as Semester Two of their junior year. Prior to the end of Year Three, students will submit a preliminary indication of their capstone project and their preferred supervisor to the ES Head of Studies (HoS). The HoS will assign first readers (i.e. the primary capstone supervisor) no later than 1 July, and students will complete a handful of project-focusing exercises facilitated by the capstone-module coordinator (CMC) during the summer preceding their fourth year of study. The first reader will usually be a faculty member associated with the Environmental Studies programme. The HoS, working with the CMC, will assign second readers by the fourth week of the first semester of Year Four. Both readers will participate in a student defense of the research proposal to be scheduled mid-semester in Semester One of Year Four.

Range of topics and formats

Capstone studies may take two general forms. One is a major research project that addresses a central question within the student’s area of specialization. Another is an applied or creative project (e.g. documentary, performance, literary piece, visual arts) with a significant academic component that tests or illuminates an important hypothesis or question that, again, builds upon the student’s area of specialization. Final capstone documents in the first category will typically approach 10,000 words. For capstones in the second category, the research document will be necessarily shorter, as determined by the first and second readers in consultation with the student, the CMC, and the HoS. Students should refer to additional instructions on format and topics as provided by the HoS and the CMC.

Activities as part of the project

Students complete the following tasks as part of their project: (i) they write and present a research proposal (with a clear statement of the research question, a literature review, and a discussion of methodology) to their first and second reader by the end of week six of Semester One; (ii) they complete and submit at least one chapter or major section of their project by the end of Semester One; (iii) they submit a complete draft of the project by the deadline set by the programme and meet with their first reader to discuss detailed feedback on the draft prior to submitting the final project; (iv) they submit their final capstone project by the deadline set by the programme and defend it in an oral exam with their first and second readers during week eleven and twelve of Semester Two; (v) they attend a weekly seminar on research in the field during Semester One, and meet regularly with their primary supervisor throughout the project; and (vi) they participate, on a voluntary basis, in a public presentation of capstone work at the end of Semester Two.

Preparation of students

There will be a series of research consultations with Yale-NUS or NUS librarians, as determined by the CMC and the first reader. Students will also complete a series of exercises facilitated by the CMC meant to focus their research approach during the summer prior to Year 4. Students should contact their first reader as soon as possible after advising assignments are finalized.

Expectations for students/supervisor interactions and work on the project

Students should schedule regular conferences with their supervisors to discuss progress, challenges, and other matters related to the capstone project. These conferences are most helpful when students provide their supervisor with a summary of current progress on the project at least 48 hours before the meeting.

Format(s) of final product

The final product for a major research project will be an academic paper (~10,000 words) or multiple-chapter document in a format common to the field. The CMC will distribute specific formatting guidelines during Semester Two. The final product for an applied/creative project will be an academic paper, described above, and the applied or creative work.

Assessment(s)

Participation in the research seminar during Semesters One and Two (15%), proposal inclusive of literature review and methodology submitted by end of week six of Semester One (10%), and quality of final paper/project and oral defense of project (75%).
15.5 Global Affairs

Description of Capstone (AY2017/2018) – GLOBAL AFFAIRS

Identification of project and supervisor:

Students should consult with their advisor throughout their third year on possible Global Affairs’ Capstone subjects. Students should notify the HoS no later than July 1 whether they intend to pursue an experiential policy outcome document or the large-scale research project Capstone option. Students pursuing the experiential option will need to have secured a pre-approved internship in advance of the start of semester1, year four. See also “Capstones in Global Affairs” available from the Global Affairs Website.

Range of topics and formats:

There are two kinds of Global Affairs Capstone projects. The first option is a large-scale research project of 10,000 words, which involves an exploration of some aspect of a transboundary social, political, and development challenge as addressed from an interdisciplinary perspective. Such projects should represent a thorough theoretical and empirical analysis, and not merely summarize the works of other scholars. The second option is for students to produce an experientially based policy outcome document relevant to field research they have completed as part of an internship conducted in Sem1 of year four. The outcome document is a written research paper of 7,000 words. Examples of possible topics for both options include but are not limited to the following: Election Violence; Natural Resource Endowments and Conflict; US Foreign Policy in SE Asia; Power Transition and Regional Security; Global Challenges to State Sovereignty; International Education Standards in Southeast Asia; Regionalism in Global Governance; ASEAN Explored; Greening the Global Shipping Industry; Human Trafficking in Southeast Asia; The Arab Spring, Umbrella Revolution and Conceptions of Democracy.

Activities as part of project:

In the first semester, all students attend a weekly research seminar colloquium. This culminates in the submission of a full research proposal inclusive of a literature review and methodology submitted at the end of Semester 1 by each student regardless of which outcome document the student is pursuing. Students pursuing the experiential learning option will also complete a bi-weekly journal entry detailing their practical work and industry-specific reflection in Semester1. The second semester of the Capstone will continue the research and writing process under the supervision of the relevant GA faculty. Students will complete their writing in Semester2, culminating in both a written paper and a presentation of their research results. Presentations of the final products will take place in Week 12 after submission of the capstone. See standards of formatting and citation criteria in “Capstones in Global Affairs” available from the Global Affairs website.

Preparation of students:

All students are expected to attend the weekly GA Capstone research seminar colloquium in Semester 1.

Expectations for students/supervisor interactions and work on the project:

Students should meet with their GA Capstone supervisor at least once a month in Semester 1 and twice per month in Semester 2, with the student providing a summary of recent activities and progress to the supervisor at least 48 hours prior to the meeting.

Format(s) of final product:

The large-scale research project Capstone option should not exceed 10,000 words. The experiential policy outcome document option should be no more than 7,000 words. The final product should include a Cover Page; Table of Contents; Abstract, Introduction, Research Design/Methodology; Literature Review; Main Argument – case study assessment or theoretical and empirical analysis; Implications; Conclusion, Annex (if needed); and Bibliography.

Assessment(s):

Participation in research seminar during Semester 1 (10%); Proposal inclusive of literature review and methodology submitted end of Semester 1 (20%); Presentation/defense of final project (20%); and Final outcome paper (50%).
15.6 History

Description of Capstone (AY2017/2018) - HISTORY

Range of topics and formats:
Students are encouraged to think critically, and imaginatively, in identifying a topic for the capstone project. The project is intended to provide the student with the opportunity to experience the full process of developing, researching and writing a critical historical work. Ordinarily, the student will identify a historical question, or locate some primary sources of interest, and attempt to come up with a topic which engages with an aspect of the historical past. All capstone projects should have an argument (thesis statement) on which the project is built. A strong capstone project would make an original contribution of historical knowledge.

All History Capstone Projects require the use of primary sources, as well as an historiographical engagement (literature review). Primary sources can be considered widely, ranging from textual sources (archival, or non-archival, printed materials), oral history sources (existing interviews, or create sources through conducting oral history interviews), media sources, private/personal materials (such as diaries and letters), visual materials, material culture, etc. Depending on the type of sources used, the student may need to obtain ethics clearance from the college (consult the capstone coordinator). The use of primary source would depend much on the methodology used in the capstone research. All these should be considered carefully in consultation with the History Major advisor (in the junior year) and the capstone coordinator, and with the capstone supervisor in the senior year. To this end, 'The Historian's Craft' which should be taken before the end of the junior year, would provide a useful, and practical, background in helping the student to think about primary sources and methodology for their capstone research.

On a general note, it is advisable for the student with an intention of possibly pursuing a postgraduate degree to opt for the dissertation format (as opposed to the project format) as per below.

Identification of project and supervisor:
The range of topics for the capstone project depends on the availability of a suitable supervisor amongst the History faculty at YNC. In certain cases, the capstone coordinator, in consultation with the HoS, may determine that it would be beneficial for the student to have a YNC faculty other than the History faculty or a faculty at NUS, to act as a primary supervisor or secondary supervisor, then the arrangements will be made accordingly.

The process for the identification of a possible capstone topic begins in the junior year (Year 5), in consultation with their History Major advisor. The decision on the capstone topic must be finalized by the end of Week 2 of Semester 1, in the senior year. Students are strongly encouraged to take advantage of the compulsory course, 'The Historian's Craft' taken in their junior year, to start thinking about their capstone topics. Moreover, each History Capstone student is expected to make an individual appointment with Ms Priyanka Sharma in the College Library in order to obtain assistance on their online research tools.

Format(s) of final product:
Dissertation-based capstone projects should result in a written work of 6000 - 11000 words, exclusive of bibliography and appendices. Non-thesis-based projects should result in a completed product, accompanied by a written report of 4500 - 5500 words, exclusive of bibliography. In either case, the written work should comprise of the introduction, main body text, conclusions, with footnotes. The word limit does not include any front matter, including the table of contents, abstract, acknowledgements (optional), bibliography and appendices. There are sample capstone projects available for consultation through the capstone coordinator.

The History Capstone Seminar:
In Semester 1, all History Capstone students will be attending the History Capstone Seminar on Wednesdays as scheduled. This is compulsory. The capstone seminars is a tightly scheduled programme of research skills in the writing of the capstone project, including assignments such as annotated bibliography, literature review (secondary sources, or historiography as is known in history), writing of full capstone project proposals, in addition to acquiring the know-how about the use of archives, library resources, etc., all of which are designed to assist in the research and the writing of the capstone project. The capstone coordinator arranges off-site research related activities, such as the visit to the Rare Manuscript Collation at the National Library of Singapore, and oral history interview skills training at the National Archives (pending availability).

In parallel to the History Capstone Seminar students are expected to meet their supervisors regularly in Semester 1, about once every two weeks. This constitutes the second compulsory part of the capstone work in Semester 1, and ensures that students gain substantive advice in order to sharpen their capstone topics, to selecting the best primary and secondary sources, to develop their work. As the History Capstone Seminar is a generic seminar which cannot meet the demands of the diverse range of topics chosen by students, the supervisory support is absolutely critical to ensure that the student’s topic is properly developed as a research topic.

By the end of Semester 1, the student will have produced a detailed research proposal, having already worked on the annotated bibliography and the literature review. Moreover, students will be using the research skills acquired in the process to start their primary sources research, in close consultation with their supervisors. For the work on Semester 1, the capstone coordinator in consultation with supervisors, will give a grade of Satisfactory/Unsatisfactory, constituting 20% of the final grade for capstones.

Expectations for students/supervisor interactions and work on the project:
All students are expected to meet with their supervisors, in Semester 1 of their senior year, every two to three weeks, and in Semester 2 every two weeks, on the average. Capstone projects are due on 31 March of each academic year. Students are expected to take the initiative to arrange meetings, as well as organise a schedule of work, with their supervisors. In Semester 2, there is no capstone seminar; hence, it becomes doubly important that supervising structure is set in place with the supervisor, in order to ensure smooth completion of the capstone project.

Assessment(s):
Dissertation-based projects will be assessed as follows: 20% from the History Capstone Seminar in Semester 1 with the consultation with supervisors, 70% from the final dissertation, and 10% from the oral presentation at the end of the project to take place in late March/early April. Non-thesis based projects will be assessed as follows: 20% from the History Capstone Seminar as per the dissertation-based project above, 35% from the aesthetic and technical excellence of the finished product, 25% from the written report, and 10% from the oral presentation at the end of the project.
Law Liberal Arts (DDP)

Description of Capstone (AY2017/2018) – DDP Law and Liberal Arts

Identification of project and supervisor:

Students should choose a topic and meet with at least one possible supervisor from Yale-NUS or the NUS Faculty of Law (FOL) to discuss the formulation of a question. They should settle on a supervisor (from either Yale-NUS or FOL) and a question, and report this to the DDP Head of Studies no later than Week 10 of Semester 2 of Year 4. If a student is abroad, s/he may do this by email. If a student decides on a FOL supervisor, a Yale-NUS co-supervisor will be appointed, and vice-versa. Information on the research interests of FOL faculty can be obtained here: [https://law.nus.edu.sg/about_us/faculty/staff/staffdir.asp](https://law.nus.edu.sg/about_us/faculty/staff/staffdir.asp).

Range of topics and formats:

Students may choose any feasible topic that incorporates both law and an aspect of the liberal arts field of their choice for which they have sufficient preparation. A feasible question is one that (a) can be answered in the available research period (b) with data or research materials that are accessible and (c) by means of a methodology the student can be reasonably expected to master at the undergraduate level and within the available timeframe. The supervisor must approve the capstone’s topic, format, and methodology. The format will be a long-form research paper. Students will not be allowed to choose a topic in an area in which they have already written a paper for the fulfillment of a module requirement at NUS, Yale-NUS or another tertiary institution. In case of doubt, students should consult both the DDP Head of Studies and the FOL Vice Dean (Academic Affairs).

Activities as part of project:

After identifying a question and deciding on a supervisor, students should begin background work over the summer. By the end of Semester 1 of Year 5, students are to have a well-developed prospectus identifying the topic, question, hypothesis or thesis, and methodology in some detail. The prospectus must be approved by the supervisor and submitted to the DDP Head of Studies. Semester 2 of Year 5 will be taken up with completion of the project, which will ultimately be submitted as a written document and presented orally or in poster form.

Preparation of students:

Students should discuss the method and availability of research resources (for example, data sets, primary sources or legal materials) with their supervisor by the end of Semester 2 of Year 4. Students must adhere to the ethical conduct and academic integrity stipulations of Yale-NUS and FOL.

Expectations for students/supervisor interactions and work on the project:

The student and supervisor should, at the start of the project, decide on an optimal number of meetings and interim deadlines, taking into account the nature of the project and the student’s work habits. At a minimum, the student and supervisor should meet three times per semester.

Format(s) of final product:

The final product should be a research paper of approximately 12,000 words (excluding footnotes).

Assessment(s):

The assessment of the DDP Capstone will have the following components. Progress in the first semester will be worth 10%. The thesis will be worth 75% and an oral or poster presentation will be worth 15%. The thesis will be graded independently by the main supervisor and co-supervisor.

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1 If the proposed topic is not directly within any listed area of research, or if students are unsure, they should first consult FOL Vice Dean (Academic Affairs) at [lawundergrad@nus.edu.sg](mailto:lawundergrad@nus.edu.sg) before approaching the FOL supervisor.

2 Students may be allowed to sit in for capstone seminar organized by a liberal arts major if this is recommended by a Yale-NUS capstone supervisor and the relevant Head of Studies agrees to this arrangement.

3 For FOL ethical conduct guidelines, see [http://law.nus.edu.sg/student_matters/ethical_conduct.html](http://law.nus.edu.sg/student_matters/ethical_conduct.html).
15.8 Life Sciences

Description of Capstone (AY2017/2018) – LIFE SCIENCES

Identification of project and supervisor:

Faculty will make known to students the areas of research that are of interest to them, suggesting general areas and/or specific projects. Students are encouraged to think about these topics and, where reasonable, develop their own ideas in consultation with the faculty. The supervisor must be a member of the Yale-NUS faculty. When appropriate, an outside member of the scientific community may serve as a supervisor but a Yale-NUS co-supervisor must be appointed. All projects and supervisors must be approved by the Head of Studies.

Range of topics and formats:

The Capstone project is expected to be a significant piece of original scholarly work, carried out over the course of the fourth year. In all but the rarest of cases, such work will include scientific research. This can comprise experimental work, field-based biological or ecological research, or theoretical, computational or analytical studies. In unusual cases, the Head of Studies may approve a capstone project for which the nature of the scholarly work is not scientific research per se, but more interpretive or prescriptive. Examples might include an original history of a scientific discovery or a novel scientific policy analysis. Original scholarship remains paramount, however, reviews of the scientific literature will not be deemed suitable. The capstone project culminates in the preparation of a substantial scholarly document (a thesis) describing the research carried out, placing it in the context of previous and ongoing research in the field, and describing the results and conclusions reached in the course of the research project.

Activities as part of project:

Students are expected to work on the Capstone project throughout the fourth year. Capstone theses may include work done prior to the student’s 4th year, but must distinguish between work done during the 4th year and preliminary work. Milestones: (i) a short oral presentation to classmates and faculty, maximum of 5 minutes and 5 slides on ‘what, how and why’ of your capstone proposal. (ii) Week 15, Sem 1: a 5-page progress report is due (iii) Sem 2, around week 2: short oral presentation on progress to date and plans for completion; 5 min and 5 slides max. (iv) Sem 2, end of week 10: solid draft of capstone to be given to supervisor(s). This will not be graded per se but a failure to submit a readable draft by the deadline will incur a penalty to your grade. (v) Sem 2 Week 11 (or as defined by the College): Capstones due (vi) Sem 2, Week 15. Celebratory oral presentation of Capstone (15 minutes).

Preparation of students:

Students are encouraged to take the required Research Seminar course in their third year. There is no expectation that students will have worked in the laboratory in which they do their capstone project prior to the start of Year 4. However, students are strongly encouraged to experience some kind(s) of laboratory, field or computational research before that time, whether at Yale-NUS or elsewhere.

Expectations for students/supervisor interactions and work on the project:

Students and their Capstone supervisors are expected to meet throughout both semesters. The Head of Studies may periodically ask for updates from both students and supervisors.

Format(s) of final product:

The thesis describing the Capstone Project is a substantial written document that includes an abstract, an introduction putting the research into context, a description of the experimental or theoretical methods used in the work, a description of the results and conclusions reached, and a reference section. There is no minimum or maximum, but most theses are expected to be in the range of 6000-15000 words. More details on format and requirement for the final document can be found in the document Life Sciences Capstone Project Thesis Format and Assessment.

Assessment(s):

The Life Sciences Capstone projects will be assessed based on various oral presentations and discussions in the course of the capstone year (30%) and on the written document submitted at the thesis due date (70%). Assessment of the thesis itself will consist of two parts: 1) the scholarship of the written document, and 2) an assessment of the effort put forth by the student in carrying out the Capstone research project.
15.9 Literature

Description of Capstone (AY2017/2018) - LITERATURE

Identification of project and supervisor:

Students are encouraged to submit preliminary proposals of not more than 1,000 words by 31 March of their junior year, to the Head of Studies. If they are abroad, they may do this by email. The proposals need not specify a thesis to defend, but they should identify the topic and scope of the project, and include a brief preliminary bibliography and description of any plans for off-campus research or training. These preliminary proposals will be developed by the student, with feedback from the HoS, into formal one-page proposals articulating a clear question within a well-defined and specific area, and indicating the project’s context and significance. This, along with an indicative bibliography, will serve for the formal submission of Capstone proposals in Week 2 of Year 4. By this time, each student will have consulted with a faculty member who has agreed to serve as Capstone Supervisor and advise the project.

Range of topics and formats:

Capstone projects may include experiential (such as interviews with authors and scholars), archival, and/or text-based research, or a translation with critical framework, but the Capstone’s final form will be a formal, written document on a literary topic. Students write their theses in English but they are encouraged to work with texts in the original languages and to begin preparation in the relevant languages well in advance.

Activities as part of project:

In Semester 1 of Year 4, all Capstone-writing students attend a weekly seminar on advanced research methods. This culminates in a presentation by each student of the current status and plans for their Capstone project. Following final submission of the project, there will be a public presentation of the work to a colloquium of Literature majors and faculty and other interested persons from the campus community. This presentation, along with the grade for the seminar and the grade for the thesis, contributes to the final grade for the project.

Preparation of students:

Sufficient progress in the major (as determined by the HoS), adequate preparation for the project (as determined by the Supervisor), and consultation with the Supervisor for development of the project proposal are required prior to submission of the project proposal. Proposals will be assessed by a meeting of the Literature faculty. Students are further encouraged to seek in advance additional means of conducting research, such as invitations to relevant archives or additional library resources.

Expectations for students/Supervisor interactions and work on the project:

All students are expected to liaise with their Supervisors at least twice per month, with the student providing a summary of recent activities and progress to the Supervisor at least 48 hours prior to the meeting. While the Supervisors serve as domain experts and guides, the students will work largely on their own.

Format(s) of final product:

Literature Capstone projects should result in a thesis of approximately 12,500 words (roughly 50 pages) that includes an abstract, an introduction, developed chapters, and a list of works cited.

Assessment(s):

Capstone projects in Literature will be assessed at 15% from the first semester seminar, 15% from the public presentation at the end of the project, and 70% from the thesis itself.
15.10 Mathematical Computational Science

Description of Capstone (AY2017/2018)
Mathematical, Computational, and Statistical Science

Identification of project and supervisor:

Students should consider their research interests and initiate a discussion with faculty before the end of Year 3 culminating in an agreement between student and supervisor on the broad area of research, including the rough proportion of exposition, theoretical research, numerical experiment, statistical data, programming and hardware design. Students whose research requires data will need to demonstrate that all the information can be collected in time for the project to go forward in Year 4. The HoS will finalize the supervising arrangements by early July, and details included in the Capstone proposal must be submitted to the HoS at the end of Week 4 in the following Semester 1. Other experts may be available as Capstone supervisors, as long as a faculty member at Yale-NUS serves as co-supervisor.

Range of topics and formats:

In mathematics, computer science, and statistics, expositions of famous theorems are possible, requiring research on motivations, applications, and proofs. Original research contributions are also possible in some branches of mathematics, computer science, and statistics or a combination of them. A capstone may mix numerical research in mathematics with theory, e.g., providing numerical evidence for an open conjecture. Research in computer science may include a comprehensive survey and/or software or hardware development. Statistical and applied projects are possible, obtaining and analyzing data in a statistically robust manner, or studying applications of mathematics and computation to the natural or social sciences. Projects that combine any of the above subjects are also allowed. All projects must be accompanied by a thesis presenting the results in context followed by an oral presentation and an interview.

Activities as part of the project:

In the first four weeks of Year 4, students should work with their supervisor to create a detailed research plan with goals for the first semester, standards for ‘good progress’ after the first semester, and methods for achieving good progress. Several written reports on the progress made on the Capstone Project must be submitted during Semester 1. Throughout the academic year, students must participate in a weekly seminar (common to all MCS majors) to discuss and present ongoing research, and develop further writing, research, and professional skills related to mathematics, computer science, or statistics.

Preparation of students:

Preparation for the Capstone project entails coursework in the 3rd year. Experience from study abroad, summer research programs, and professional internships may also be helpful. Students are encouraged to follow their curiosity, talk to faculty, attend seminars, and read about areas of research.

Expectations for students/supervisor interactions and work on the project:

All students are expected to meet with their supervisors every week and provide details on their progress, according to the plan created at the beginning of Year 4.

Format(s) of final product:

The thesis should normally be between 25 and 45 pages, and should generally not exceed 65 pages, including abstract, introduction, body, and bibliography. Research papers are often short, but Capstone projects should include more context and introduction than typical research papers. The thesis should be typeset according to professional research standards and readable using non-proprietary software. Projects may include appendices such as computer code or data sets. Hardware projects should include the device as well as photographs and descriptions for the permanent record.

Assessment(s):

Assessment consists of 25% from reports on research, 15% from seminar and symposium talks, 45% from the Capstone thesis itself (written document, software, hardware, etc., assessed on format, writing, and quality of research), and 15% from the oral presentation of the project and the subsequent interview.
15.11 Philosophy

Description of Capstone (AY2017/2018) - PHILOSOPHY

Identification of project and supervisor:

Students are encouraged to submit preliminary proposals by 31 March of their junior year, to the Capstone Coordinator for the following semester. If they are abroad, they may do this by email. The proposals need not specify a thesis to defend, but should identify an area and an aspect to be addressed. Proposals may suggest appropriate supervisors among Yale-NUS faculty, or among NUS faculty where relevant. Between this time and the formal submission of Capstone proposals (Week 2 of Year 4), these will be developed by the student, with feedback from Capstone Coordinators, into formal one-page proposals articulating and motivating a distinct question within a well-defined specific area, and indicating its philosophical (and where relevant historical) context and significance; an indicative bibliography should be appended. Supervisors will be assigned according to faculty expertise, with consideration taken for fair distribution.

Range of topics and formats:

The project may be on any philosophical topic which can be supervised by our faculty, and which can afford the opportunity for the student to develop and display depth of understanding, appreciation of the historic and current state of the discussion, philosophical acuity, independent thinking and a broad perspective on how their special topic fits into other areas and types of philosophy, and relates to neighbouring disciplines.

Activities as part of project:

Students will participate in Capstone Seminar activities, which in addition to sharing work in various stages of progress, will include attending philosophy talks by visiting speakers. They will present their work in the Capstone Symposium at the end of Sem. 1, attended by the full philosophy faculty. At the symposium, they will have comments from other students, and act as commentators themselves. At the end of the academic year, there will be a public defence, where students respond to questions from the full philosophy faculty.

Preparation of students:

This will occur primarily in the context of the Capstone seminar, and secondarily in the proposal development stage, as appropriate.

Expectations for students/supervisor interactions and work on the project:

Students can expect to meet with their supervisor at least fortnightly, for 1-2 hrs, and may meet weekly at appropriate stages in development.

Format(s) of final product:

In almost all cases, the final written work will take the form of a scholarly dissertation making a substantial contribution to the philosophical discourse, defended in a public viva after submission. It may be 10,000-20,000 words long, though some may be longer or shorter. Proposals for final written work taking alternative literary forms (dialogue, play, novel) will be entertained; some suitable reflective or critical reflection on the literary piece would normally be expected in such cases, to be worked out in conjunction with the Capstone supervisor.

Assessment(s):

First semester Capstone Symposium: 15%
Dissertation: 75%
Viva/Oral defence: 10%. 
Description of Capstone (AY2017/2018) – PHYSICAL SCIENCES

Identification of project and supervisor:

The Capstone project in the Physical Sciences will be identified in conversations between the student, the potential Supervisor, and the Head of Studies. Direct supervisors may be Yale-NUS faculty, or other members of the academic community approved by the HoS. Every Capstone Project must have a Yale-NUS faculty member as the faculty mentor, responsible for assessment and submission of grading for the Capstone project. The project is expected to be a significant piece of original research, carried out over the course of the fourth year. It may involve experimental work in the laboratory of the Supervisor, or theoretical or computational work under the guidance of the Supervisor. The project is expected to culminate with the preparation of a substantial scholarly document (a thesis) describing the research carried out, placing it in the context of previous and ongoing research in the field, and describing the results and conclusions reached in the course of the research project.

Range of topics and formats:

Capstone projects in the Physical Sciences major may focus on a laboratory (experimental) or a theoretical/computational research project in the physical sciences (physics, chemistry, astrophysics, geosciences). No purely library research topics will be approved. The capstone project is a significant piece of original independent research, which may be a part of or related to ongoing research in the supervisor’s laboratory. It may also be on a topic proposed and developed by the student, with a supervisor agreeing to provide laboratory space and guidance for the project.

Activities as part of project:

Students are expected to work on the Capstone project throughout the first and second semester of the fourth year. Near the end of the first semester, there will be an oral presentation by the student on the Capstone project, and a description of progress to that point. Throughout both semesters, students are expected to meet regularly with their Capstone Supervisor, to discuss progress and provide guidance and feedback. A thesis describing the research project will be submitted to the Capstone Supervisor by the thesis due date.

Preparation of students:

Students are encouraged to satisfy the laboratory course requirements of the Physical Sciences major prior to the fourth year. They are also encouraged to obtain laboratory research experience by working in faculty research groups before the fourth year, either with the Yale-NUS faculty or during other research internships either locally or abroad.

Expectations for students/supervisor interactions and work on the project:

Students and their Capstone Supervisors are expected to meet regularly throughout both semesters. This may involve formal scheduled meetings, attendance of the student at regular research group meetings of the Supervisor’s laboratory, and informal mentoring in the laboratory setting.

Format(s) of final product:

The thesis describing the Capstone Project is a substantial written document that includes an abstract, an introduction putting the research into context, a description of the experimental or theoretical methods used in the work, a description of the results and conclusions reached, and a reference section. More details on format and requirement for the final document can be found in the document Physical Sciences Capstone Project Thesis Format and Assessment.

Assessment(s):

The Physical Sciences Capstone projects will be assessed based on 20% for the oral presentation at the end of Semester 1, and 80% on the written document submitted at the thesis due date. Assessment of the thesis itself will consist of two parts: 1) the scholarship of the written document, and 2) an assessment of the effort put forth by the student in carrying out the Capstone research project. Details of the assessment rubric are provided in the Physical Sciences Capstone Project Thesis Format and Assessment document.
Description of Capstone (AY2017/2018)
Politics, Philosophy, Economics

Identification of project and supervisor:

Students should choose a preliminary topic and meet with at least two possible advisors to discuss the formulation of a research question by the end of their junior year; students may then suggest an advisor. A formal research question is due at the end of Week 2, Semester 1, Year 4. Supervisors will be assigned according to faculty expertise and availability, with an eye towards fair distribution of supervisory work.

Range of topics:

Students may choose any feasible topic that incorporates both of their subfields (i.e., philosophy & politics, philosophy & economics, or politics & economics). The student’s main field may well dominate the project. A feasible question is one which a) can be answered in the available research period, b) with data or research materials that are accessible, and c) by means of a methodology the student can be reasonably expected to master at the undergraduate level within the available time frame. This will be at the discretion of the advisor.

Activities as part of project:

After identifying a question and an advisor at the end of Y3, students should begin background work over the summer. In Y4S1, completion of background reading and development of the capstone project’s methodology will be supported and structured through student participation in the research seminar series appropriate to the student’s primary field. By the end of Y4S1, students should have a well-developed prospectus identifying topic, question, hypothesis or thesis, and methodology in some detail. The prospectus must be approved by the advisor and submitted to the HoS. Y4S2 will be taken up with completion of the project, which will ultimately be submitted as a written document and presented orally or in poster form.

Preparation of students:

Students should discuss method and resource availability as early as possible with an anticipated advisor, other expert faculty, and any relevant librarians – ideally during the junior year. Beyond this, course work in the major is considered sufficient preparation.

Expectations for students-supervisor interactions and work on the project:

Students and their advisors should, at the start of the project, decide on an optimal number of meetings and interim deadlines, taking into account the nature of the project and the student’s work habits. At a minimum, student and advisor should meet twice per semester.

Format(s) of final product:

The final product should, for a philosophy or economics project, follow those majors’ capstone guidelines. For a politics capstone, the final product should be a research paper of approximately 8,000-10,000 words. The paper should include an abstract and bibliography, some discussion of relevant literature, and a clear statement of the question addressed, the position taken, and the arguments supporting it.

Assessment(s):

Progress in the first semester seminar will be worth 15%, the thesis will be worth 80%, and an oral or poster presentation will be worth 5%.
15.14 Psychology

Description of Capstone (AY2017/2018) - PSYCHOLOGY

Identification of project and supervisor:

Students are responsible for corresponding with members of the psychology teaching staff in order to identify potential supervisors and topics for the capstone project. The HoS will then ask for preferences, collate them, and assign supervisors in consultation with the Psychology faculty before the start of Year 4.

Range of topics and formats:

All capstone projects in psychology will be empirical research projects that involve original data collection by the student. Any topic in psychology that is agreeable to the student and supervisor can be selected for a capstone project.

Activities as part of project:

During the first semester, students will attend a research seminar in which they present their capstone project proposals for comment by other students as well as faculty. Following this presentation students will obtain ethical clearance for their studies after which they are free to begin collecting data. These seminars will occur during September (~6 total meeting times), thereby allowing sufficient time to gain ethical clearance and begin collecting data even before the break. During semester 2 students will again attend a seminar (~6 total meetings in February) during which they will present the findings and conclusions from their data collection for comment by students and faculty.

Preparation of students:

By the time of the capstone project, students should have taken Statistics and Research Methods for Psychology as well as one laboratory course. These courses provide specific preparation for developing and analysing psychology experiments. If they haven’t taken these courses they must be taken concurrently with the capstone project.

Expectations for students/supervisor interactions and work on the project:

Students should meet with their supervisors approximately twice per month to discuss progress, challenges and any other matters related to the capstone project. Prior to each meeting students should provide their supervisors with a summary of current progress on the project at least 48 hours before the meeting. Supervisors can comment on drafts, but no more than two rounds of comments should be expected for any section of writing.

Format(s) of final product:

The final product should be in the range of 8,000 to 10,000 words and formatted as if for a journal article. The report should include an abstract, introduction, methods, results, and discussion along with a bibliography. The thesis should use formatting guidelines from the APA and use APA conventions for statistics, citations and references.

Assessment(s):

Grades will be based on both performance in the seminar as well as the written thesis. 10% of the grade will be based on the thesis proposal presentation, 10% will be based on the presentation of results in semester 2, and 80% will be based on the thesis itself. All theses will be graded by both the supervisor and one additional psychology faculty member.
Description of Capstone (AY2017/2018) – URBAN STUDIES

Identification of project and advisor
Students should begin to think about possible Capstone Projects during their Junior Year or before. Prior to the end of Year 3, students will be asked to give a preliminary indication to the Head of Studies of their intended Capstone Project, so the Head of Study can determine a suitable advisor. Who you get as a senior capstone advisor will be determined by a combination of faculty match to Project and availability. Senior capstone advisors will normally be allocated at the end of the Junior Year. Normally, the senior capstone advisor will be drawn from Faculty in the Urban Studies Major, but an advisor may also include other Yale-NUS or NUS faculty, or approved external advisors, working in conjunction with Yale-NUS faculty.

Research proposal
A first draft research proposal is required in Week Zero of Semester 1, Year 4. Students may change their topics only once after Year 4 commences and normally no later than Week 7, Semester 1, Year 4.

Range of topics
The Capstone Project should make a contribution to a particular empirical, theoretical or methodological question within the field of Urban Studies. Capstone Projects must be based on field or archival research, or the analysis of existing data sets (quantitative, visual or textual). Guidance will be provided by the Head of Study on the scope and range of topics supported in the Major.

Activities as part of project
The Capstone Project in Urban Studies is supported through the Urban Studio, which is a regular seminar in which students read, report and peer review. Urban Studio complements the one-on-one student- advisor relationship. In Semester 1 of Senior Year the Urban Studio supports the development and realization of the Capstone Project, culminating in the submission of a written assignment that includes the research proposal a methodology statement, a literature review, and other materials as required. In Semester 2 the Urban Studio meets as required and offers a forum for the presentation of, and constructive feedback on, draft versions of the final work. The final Capstone Project submission is in Week 11, Semester 2 of Senior Year.

Preparation of students
Students should normally have completed, or be on track to complete, Introduction to Urban Studies, Urban Theory, and approved methodology course/s before they commence their Capstone. Students who plan to do Capstone Project research over the summer preceding Year 4 must have completed the Capstone Project Proposal and the Yale-NUS Conducting Safe and Ethical Research — Division of Social Sciences Review prior to commencing research.

Expectations for student/advisor interactions and work on the project
Students and their capstone advisor should, at the start of the senior year, decide on an optimal number of meetings and interim deadlines for completion of agreed work, taking into account the nature of the Project and the expectations of the Urban Studio scaffold course. Students can expect their senior capstone advisor to read and provide detailed feedback on drafts of at least 30% of the final Project submission. Students are also expected to attend and actively participate in the Urban Studio.

Format(s) of final product
Students majoring in Urban Studies can elect to submit their final assessed work in one of three formats, provided they are deemed to have appropriate preparatory training and this is approved by the Head of Study in advance of the start of the senior year:

- A 10,000 word written report in academic format, and an Urban Studio final presentation;
- A multi-media work (e.g. film, photographic essay) with a 5,000 word written report, and an Urban Studio final presentation;
- A spatial analysis (e.g. GIS, CAD, etc.), with a 5,000 word written report, and an Urban Studio final presentation.

The format a student selects must be consistent with the skills they have acquired prior to the capstone year.

Assessment
Final Project Work Submission (100%).
## Appendix 2 – Capstone Deadlines and Forms

### Timeline for Capstone Activities (AY2017 – 18)

These are deadlines. All forms/reports can be submitted earlier.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Deadline</th>
<th>Activity</th>
<th>Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Week 6</td>
<td>Each student submits <em>Capstone Proposal Form</em> to HoS.</td>
<td><a href="#">P1 Capstone Proposal Form (f).pdf</a></td>
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<tr>
<td></td>
<td>22 Sept 2017</td>
<td>HoS consolidates and submits to Registry:</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>i. <em>Capstone Proposal Form</em>; and</td>
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<td></td>
<td></td>
<td>ii. <em>Capstone Registration List.</em></td>
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<td></td>
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<td>*Note: Registry will send HoS the <em>Capstone Registration List</em> (excel)</td>
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<td></td>
<td>pre-populated with names of seniors in the major by the end of week 0.</td>
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<tr>
<td></td>
<td></td>
<td>HoS fills in the project title, name of supervisor and name of co-supervisor before returning a softcopy, together with scanned copies of the <em>Capstone Proposal Forms</em>, to Registry.</td>
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<td>Majors that require students to submit their capstone proposals later may submit the <em>Capstone Proposal Forms</em> by week 13. However, the <em>Capstone Registration List</em> must be returned to Registry by Week 6, 22 Sept 2017</td>
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<td></td>
<td>Week 7 6 Oct 2017</td>
<td>Each student submits a scanned copy of the <em>Capstone Funding Application Form</em> to his or her Divisional Manager.</td>
<td><a href="#">F1 Capstone Funding Application</a></td>
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<td>Note: Any travel costs outside of Singapore and substantial travel by taxis will need pre-approval from the Dean of Faculty. For more information, refer to Instructions for Capstone Funding (<a href="#">link</a>).</td>
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<tr>
<td>2</td>
<td>Week 11</td>
<td>Student submits capstone final report. <strong>Important:</strong> Please refer to <em>Submission of Capstone Report Format Guidelines</em> (<a href="#">link</a>).</td>
<td><a href="#">R1 Student’s Declaration of Perso</a></td>
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</table>
A softcopy of the report, in pdf format only, is to be:

i. uploaded on to Canvas;
ii. emailed to the HoS; and
iii. emailed to Goh Bros.

HoS emails capstone reports to Supervisors/1st Examiners and 2nd Examiners with the Assessment Rubric for the major.

Note: Student’s Declaration of Personal Work form should be included in the capstone final report.

Week 12
13 April 2018

Student submits hardcopy of the Request for Payment form for capstone claims to their Divisional Manager.

Note: For more information, refer to Guidelines for Submitting Expenses Statements (link).

By 3rd week of June - Final report submission for students undergoing remediation.
**Record of Version Updates:**

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