## Sample course outline
### Geography – ATAR Year 12

**Semester 1 – Unit 3 – Global environmental change**

<table>
<thead>
<tr>
<th>Week</th>
<th>Key teaching points</th>
</tr>
</thead>
</table>
| 1    | **Overview of nature, extent, cause and consequences of land cover change**  
  - Define the concepts of environment, natural and anthropogenic biomes, land cover change, ecosystem structure and dynamics, biodiversity loss, climate change and sustainability  
  - Identify and classify examples of land cover changes with reference to global forests, agriculture and urban land cover |
| 2–3  |  
  - Geographical skills  
    - mapping skills  
    - remote sensing skills  
    - geographical and statistical data skills  
    - skills in the use of information and communications technology and geographical information systems  
  - Use remote sensing images, other spatial technologies, and fieldwork to identify and measure the location, nature, rate, extent and consequences of land cover change  
  - The implications of anthropogenic biomes to the functioning of the world’s ecosystems  
  - The impact of world population growth, growing affluence, advances in technology on the nature, rate and extent of land cover change and biodiversity loss  
  **Task 1: Practical skills test based on mapping skills and statistical data analysis** |
| 4    |  
  - The processes of land cover change (deforestation, the expansion and intensification of agriculture, rangeland modification, land and soil degradation, irrigation, land drainage and reclamation, and the growth of urban settlement, industry and mining)  
  - The differences in the process of land cover change between countries due to factors such as government policy, institutional arrangements, land ownership, type of economy, ideology and culture  
  - Projecting changes in land cover using existing spatial models, incorporating both environmental and socioeconomic variables  
  - Indigenous peoples’ land management practices and their impact on land cover over time, including those of Aboriginal and Torres Strait Islander Peoples  
  - The impacts of land cover change on local and regional environments, including changes to the water cycle, soil erosion and degradation, loss of habitat and biodiversity, the degradation of aquatic and marine environments, loss of ecosystem services, changes to regional climates, and urban heat islands |
| 5–6  | **Depth study one – the links between changes in land cover and changes in biodiversity**  
  - the spatial distribution of the world’s biomes  
  - the key elements of ecosystem structure and dynamics (biotic and abiotic elements, food chains and webs, biomass, trophic levels, flows of matter and energy)  
  **Task 2: Short and extended response test based on content from the overview of nature, extent, causes and consequences of land cover change** |
| 7–10 |  
  - the causes (natural and anthropogenic) and rate of declining biodiversity  
  - fossil records as a major type of evidence for loss of biodiversity through geological time  
  - the loss of ecosystems as a major type of evidence for loss of biodiversity in recent human history  
  - the projected impacts of loss of biodiversity  
  - the interrelationships between land cover change and biodiversity loss, including shifting ecological boundaries, evolutionary diversification and species extinction  
  - the effects of biodiversity loss in natural and anthropogenic biomes on ecosystem services and species, ecosystem and genetic diversity; loss of human foods and medicinal plants  
  **Task 3: Geographical inquiry investigating the link between land cover change and biodiversity** |
<table>
<thead>
<tr>
<th>Week</th>
<th>Key teaching points</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Part A: (2.5%) Geographical inquiry</strong>&lt;br&gt;<strong>Part B: (5%) In-class validation based on unseen questions, directly connected to the content in the inquiry</strong></td>
</tr>
<tr>
<td>11–12</td>
<td><strong>Depth study two – how the impacts of land cover change are being addressed and evaluated</strong>&lt;br&gt;• approaches to land cover restoration and rehabilitation, and the mitigation of future land cover changes, including preservation strategies&lt;br&gt;• the current and proposed strategies, at local to global levels, implemented to mitigate the adverse effects of loss of biodiversity&lt;br&gt;• how human activity has adapted, or may be required to adapt, to loss of biodiversity</td>
</tr>
<tr>
<td></td>
<td><strong>how agroforestry addresses the impact of land and soil degradation in the Western Australian wheatbelt</strong>&lt;br&gt;<strong>an evaluation of agroforestry, giving consideration to environmental, economic and social benefit and costs</strong>&lt;br&gt;<strong>an evaluation of one alternative approach to the management of land and soil degradation in the Western Australian wheatbelt</strong>&lt;br&gt;<strong>using the concept of sustainability to determine the extent to which the approach has the potential to address the issue into the future</strong>&lt;br&gt;<strong>Task 4: Short and extended response test based on how the impacts of land cover change are being addressed and evaluated</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Geographical skills</strong>&lt;br&gt;• mapping skills&lt;br&gt;• remote sensing skills&lt;br&gt;• graphical and statistical data skills&lt;br&gt;<strong>Task 5: Practical skills test, based on Geographical skills including, topographical map interpretation, remote sensing skills and statistical data analysis</strong></td>
</tr>
<tr>
<td>16</td>
<td><strong>Task 6: Semester 1 examination</strong></td>
</tr>
</tbody>
</table>
### Semester 2 – Unit 4 – Planning sustainable places

<table>
<thead>
<tr>
<th>Week</th>
<th>Key teaching points</th>
</tr>
</thead>
</table>
| 1–2  | **Overview of places and their challenges**  
   Places  
   - the process of urbanisation and its implications for world population growth and human wellbeing in urban and rural places  
   - the economic and environmental interdependence of urban and rural places  
   - the historical, cultural, economic and environmental factors that have contributed to the spatial distribution of urban and rural places in Australia  
   - the processes of urban sprawl, invasion and succession, renewal, planning, land use competition, inertia and agglomeration that have contributed to the characteristics and functions of urban and rural places in Australia  
   - the changing demographic, economic and social characteristics, including age, gender and socioeconomic and cultural distribution, in urban and rural places in Australia  

| 3–4  | Challenges facing places  
   - an overview of the challenges facing rural and remote places in Australia, including Indigenous communities (i.e. population loss, economic restructuring, employment, housing, service and water provision, concentrations of socially vulnerable populations, social inclusion and exclusion, transportation, resource degradation, land use conflicts, declining political influence, isolation and remoteness, fly-in/fly-out work patterns)  
   - an overview of the challenges facing megacities and Australian metropolitan and regional centres (i.e. housing, economic restructuring, employment, transportation, congestion, environmental degradation, waste management, personal safety, land abandonment, urban sprawl, socio-spatial inequality, social inclusion and exclusion, changing demographics)  

**Task 7: Short and extended response test based on the overview of places and challenges**

| 5–7  | **Depth study one** – Using fieldwork and/or secondary sources, students investigate four significant related challenges in metropolitan Perth and how these challenges are being addressed.  
   - Geographical inquiry skills  
   - For metropolitan Perth, students investigate:  
     - the site, situation, internal and external morphology and functions  
     - the demographics in relation to each of the following challenges  
       - transportation  
       - congestion  
       - environmental degradation  
       - urban sprawl.  
   Students investigate:  
   - the nature, scope and causes of each challenge and the implications for metropolitan Perth  
   - the views and attitudes of major stakeholder groups related to each challenge  

| 8–9  | the range of planning strategies that have been used to address each challenge, and how these compare with, and/or have been informed by, responses implemented in other places, both inside and outside Australia  
   - the extent to which the planning strategies adopted in metropolitan Perth have been, or could be, informed by the concept of sustainability  
   - the strategies adopted in metropolitan Perth to address these challenges  
   - the extent to which these strategies have enhanced its sustainability and liveability.  

**Task 8: Fieldwork based on the Perth metropolitan area with a case study of Cockburn Central town centre**  
(2.5%) Part A: Collecting and interpreting primary information and/or data  
(5%) Part B: Fieldwork/practical skills test based on an in-class validation of the fieldwork on the Perth metropolitan area and the case study of Cockburn Central town centre
<table>
<thead>
<tr>
<th>Week</th>
<th>Key teaching points</th>
</tr>
</thead>
<tbody>
<tr>
<td>10–13</td>
<td><strong>Depth study two</strong> – <em>Using fieldwork and/or secondary sources, students investigate two significant challenges faced in New York.</em>&lt;br&gt;For New York, students study:&lt;br&gt;• the site, situation, internal and external morphology and functions&lt;br&gt;• the demographics&lt;br&gt;in relation to the following challenges:&lt;br&gt;  ▪ congestion&lt;br&gt;  ▪ waste management.&lt;br&gt;Students investigate:&lt;br&gt;• the nature, scope and causes of each challenge and the implications for New York&lt;br&gt;• the range of planning strategies used to address each challenge, and how these compare with, and/or have been informed by, responses implemented in other world megacities&lt;br&gt;• the extent to which the planning strategies adopted in the New York have been, or could be, informed by the concept of sustainability&lt;br&gt;• the strategies adopted in New York to address these challenges&lt;br&gt;• the extent to which these strategies have enhanced the sustainability and liveability of New York.&lt;br&gt;&lt;strong&gt;Task 9: Geographical inquiry investigating the following two challenges: congestion and waste management in New York and how these challenges are being addressed&lt;/strong&gt;&lt;br&gt;&lt;strong&gt;Part A: (2.5%) Geographical inquiry&lt;/strong&gt;&lt;br&gt;&lt;strong&gt;Part B: (5%) In-class validation based on unseen questions, directly connected to the content in the inquiry&lt;/strong&gt;</td>
</tr>
<tr>
<td>14</td>
<td><strong>Geographical skills</strong>&lt;br&gt;• mapping skills&lt;br&gt;• remote sensing skills&lt;br&gt;• graphical and statistical data skills&lt;br&gt;&lt;strong&gt;Task 10: Short and extended response test based on New York, map interpretation, remote sensing skills and statistical data analysis&lt;/strong&gt;</td>
</tr>
<tr>
<td>15</td>
<td><strong>Revision</strong></td>
</tr>
<tr>
<td>16</td>
<td><strong>Task 11: Semester 2 examination</strong></td>
</tr>
</tbody>
</table>