ASEARC Teaching Collaboration

The Applied Statistics Education and Research Collaboration (ASEARC) aims to develop effective collaboration between the statistics groups at the universities of Wollongong, Newcastle, and Western Sydney.

The aim of the project is to:
- jointly develop and deliver subjects and courses;
- form a graduate program to improve the research environment for Higher Degree Research students, through shared seminars, training in research methods, workshops and supervision;
- improve research at each institution by operating as a research centre, with shared seminar programs, staff development, workshops and mentoring;
- enable increased consulting and training by creating a larger pool of staff and skills available for industry.

The project will involve:
- joint development and delivery of subjects and courses.
- a detailed review of the degree and subject offerings at each institution
- development of a range of coordination mechanisms.
- identifying which subjects should be given priority for being made available to all ASEARC members.

Some Benefits:
- efficiency involved in sharing subjects.
- undergraduate, honours and post-graduate students accessing subjects that would otherwise not be available to them, developed and presented by experts who would not usually be accessible.
The technological and administrative environment is also being assessed and the steps needed to sufficiently align them across the member institutions are being identified.

At the end of the project there will be well integrated degree programs involving shared subjects, some of which will be delivered across several sites.

ASEARC will also form a common graduate program to improve the recruitment of, and research environment for, Higher Degree Research (HDR) students.

Centre for Statistical and Survey Methodology

CSSM’s vision is to be recognised as the premier statistical design and analysis centre in Australia and one of the top five centres in the world.

It aims to be the research and training provider of choice for industry, government and students within Australia.
Objectives and Constraints

- Ensure survival of statistics as a recognised complete discipline at UoW that is robust to
  - Cycles and trends in enrolments – e.g. BMathFin, MStat
  - Changes in senior management
  - Changes in government policy to higher education – e.g. compacts

- No increase in number of subjects taught by UoW
  - Some decrease perhaps in longer term

- Good foundation for students taking statistics major – keeping solid mathematical foundation and providing marketable skills

- Good preparation for hons/masters students for career as professional statisticians and researchers

- Support move to 72cpt masters degree in a cost effective way

- Exploit niches in which we have genuine world class track records in fundamental research, contract research and consulting

- Create programmes that can attract students and industry support

- Be seen to support important UoW initiatives, such as Illawarra Health and Medical Research Institute, Innovation Campus
## Draft Ultimate Programme - Wollongong Viewpoint

<table>
<thead>
<tr>
<th>300 Level</th>
<th>400/900 Level</th>
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<tbody>
<tr>
<td>1. Statistical Inference (UoW)</td>
<td>1. Advanced Data Analysis (GLMM's etc) (UoW)*</td>
</tr>
<tr>
<td>2. Linear &amp; generalised linear models (UoW)</td>
<td>2. Design &amp; Analysis of Experiments and Clinical Trials (UoW)</td>
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<tr>
<td>5. Applied Bayesian Methods (UoN)</td>
<td>5. Advanced Bayesian Analysis (UoN)</td>
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<tr>
<td>6. Time series Analysis &amp; Stochastic Processes (UoN)</td>
<td>6. Longitudinal Data Analysis (UoN)</td>
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<td>7. Total Quality Management (UoN)</td>
<td>7. Categorical Data &amp; MVA (UWS)</td>
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<td>8. Data mining (UWS)</td>
<td>8. Project</td>
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<td></td>
<td>9. Stochastic Methods in Finance (UoW)</td>
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* UoW subject made available to UoN and UWS

We will need to go through a process of detailed analysis to align subjects in practice - form teams across members