**COURSE DETAILS**

**Course Code:** F20AA  
**Full Course Title:** Applied Text Analytics  
**SCQF Level:** 10  
**SCAF Credits:** 15  
**Available as Elective:** Yes

**DELIVERY LEVEL**

<table>
<thead>
<tr>
<th>Undergraduate:</th>
<th>Yes</th>
<th>Postgraduate Taught:</th>
<th>No</th>
<th>Postgraduate Research:</th>
<th>No</th>
</tr>
</thead>
</table>

**Additional Information:**

**COURSE AIMS**

This course aims to provide the students with knowledge and skills in applied text analytics focusing on Machine Learning and Natural Language Processing tools.

In particular the course:

- Presents the area of text analytics and provides fundamental tools to extract, represent and analyze information from text sources using machine learning models
- Provides a fundamental understanding of concepts and tools to build effective language-aware systems and applications
- Presents basic understanding of deep learning models for Natural Language Processing applications and related research
- Discusses current research advances, business cases and future direction of the field

**LEARNING OUTCOMES – SUBJECT MASTERY**

- Demonstrate understanding of the text analytics process and relevant applications
- Work with text analytic tools to uncover information from text
- Understand challenges related to implementation and scalability
- Understand Deep learning approach to NLP problems and some available tools for implementation
- Demonstrate understanding of some recent advances in the field of NLP & text analytics.

**LEARNING OUTCOMES – PERSONAL ABILITIES**

- Problem analysis and critical review
- Report writing and presentation skills
- Working in groups
- Use a range of software for ML, text analytics and NLP

**SYLLABUS**

Following topics will be covered with varying levels of depth:

- Overview on ML models, techniques and use cases & ML project design.
- Language model & text processing principles
- Text classification & visualization
- Text Clustering & topic modeling
- Context-aware text analysis & n-gram model
- Chatbots
- Scaling text analytics
- A deep learning approach to NLP:
F20AA Applied Text Analytics

- Sequence models (ex: RNN, BRNN, LSTM) & transfer learning

- Applications in Named Entity Recognition, learning word-embeddings, machine translation, sentiment classification

- Research Directions and Business Cases

COURSE RELATIONSHIPS

N/A

LOCATION AND ASSESSMENT METHODS

<table>
<thead>
<tr>
<th>Edi</th>
<th>SBC</th>
<th>Ork</th>
<th>Dub</th>
<th>Malay</th>
<th>IDL</th>
<th>COLL</th>
<th>ALP</th>
<th>OTH</th>
<th>Method</th>
<th>Weight</th>
<th>Exam Mins</th>
<th>Type</th>
<th>Diet</th>
<th>Synoptic Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Examination</td>
<td>50</td>
<td>120</td>
<td>Assessment</td>
<td>Semester 2</td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Coursework</td>
<td>50</td>
<td>120</td>
<td>Assessment</td>
<td>Semester 2</td>
<td></td>
</tr>
</tbody>
</table>