

No.	Perkara	Perincian												
1	Tajuk	<i>Master of Science in Data Science &amp; Analytic</i> Sarjana Sains (Sains Data & Analitik)												
2	Durasi	Executive (Full Time)/Eksekutif (Sepenuh Masa) : 3 – 4 semester (1½ - 2 years) Credit Hour/Jam Kredit : 45 kredit												
3	Pengenalan Program	<p><i>Malaysia is in need of many data scientist for the country to explore new Malaysia is in need of many data scientists for the country to explore new economic opportunities across the globe. The high demand on human capital in the area of data science and analytics has encouraged us to offer an academic program which produce data scientist in accordance to the national big data framework. Data science is an area which could prepare experts who manage to blend knowledge on mathematics, statistics and computing skills in order to dig information inherent in the big data environment for quick and effective decision making.</i></p> <p>Malaysia memerlukan ramai saintis data untuk negara menerokai baharu Malaysia memerlukan ramai saintis data untuk negara meneroka peluang ekonomi baharu di seluruh dunia. Permintaan tinggi terhadap modal insan dalam bidang sains data dan analitik telah mendorong kami untuk menawarkan program akademik yang menghasilkan saintis data mengikut rangka kerja data besar negara. Sains data ialah bidang yang boleh menyediakan pakar yang berjaya menggabungkan pengetahuan tentang matematik, statistik dan kemahiran pengkomputeran untuk menggali maklumat yang wujud dalam persekitaran data besar untuk membuat keputusan yang cepat dan berkesan.</p>												
4	Objektif													
5	Yuran	<ul style="list-style-type: none"> <li>● <b>TEMPATAN:</b> RM 22,000.00</li> <li>● <b>ANTARABANGSA:</b> RM 28,600.00</li> </ul>												
6	Senarai Kursus Wajib	<p><b><i>This programme is divided into three modules as follows:</i></b></p> <ul style="list-style-type: none"> <li>- <i>Data Computing</i></li> <li>- <i>Data Analytics</i></li> <li>- <i>Finance and Business Analytics</i></li> </ul> <p><i>Candidates must register and pass at least 36 credit hours (core and courses) and complete a capstone project or 9 credit hours.</i></p> <p><b>CORE COURSES</b></p> <table border="1" data-bbox="475 1693 1474 1986"> <thead> <tr> <th data-bbox="475 1693 807 1760">SEMESTER 1</th> <th data-bbox="807 1693 1139 1760">SEMESTER 2</th> <th data-bbox="1139 1693 1474 1760">SEMESTER 3</th> </tr> </thead> <tbody> <tr> <td data-bbox="475 1760 807 1827"><i>Data Science</i></td> <td data-bbox="807 1760 1139 1827"><i>Machine Learning</i></td> <td data-bbox="1139 1760 1474 1827"><i>Capstone Project</i></td> </tr> <tr> <td data-bbox="475 1827 807 1928"><i>Mathematical Statistics with Computing</i></td> <td data-bbox="807 1827 1139 1928"><i>Research Methodology and Industrial Seminar</i></td> <td data-bbox="1139 1827 1474 1928"></td> </tr> <tr> <td data-bbox="475 1928 807 1986"><i>Data Mining</i></td> <td data-bbox="807 1928 1139 1986"><i>Elective 2</i></td> <td data-bbox="1139 1928 1474 1986"></td> </tr> </tbody> </table>	SEMESTER 1	SEMESTER 2	SEMESTER 3	<i>Data Science</i>	<i>Machine Learning</i>	<i>Capstone Project</i>	<i>Mathematical Statistics with Computing</i>	<i>Research Methodology and Industrial Seminar</i>		<i>Data Mining</i>	<i>Elective 2</i>	
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<i>Elective 1</i>	<i>Elective 3</i>	
	<i>Elective 4</i>	

- *Capstone Project: 9 credit hours*
- *5 core courses*
- *4 elective courses from 3 modules*
- *Elective courses including from FTSM, UKM-GSB and FEP*

**ELECTIVE COURSES**

**Data Computing Module**

*Data Visualization and Communication*

*Data Management*

*Unstructured Data Analytics*

*Business Analytics*

*Time Series Modelling and Forecasting*

*Network Science*

*Multicriteria Decision Making*

*Statistical Methods for Computational Biology*

*Information Modelling and Database (FTSM)*

*Information Policy and Ethics (FTSM)*

**Data Analytics Module**

*Data Visualization and Communication*

*Multivariate Analysis*

*Unstructured Data Analytics*

*Business Analytics*

*Data Management*

*Time Series Modeling and Forecasting*

*Bayesian Inference*

*Network Science*

*Multicriteria Decision Making*

*Statistical Methods for Computational Biology*

*Information Policy and Ethics (FTSM)*

**Finance and Business Analytics Module**

*Data Visualization and Communication*

*Business Analytics*

*Investment Analysis and Portfolio Management*

*Issues in Risk Management and Insurance*

*Unstructured Data Analytics*

*Data Management*

*Time Series Modelling and Forecasting*

*Multicriteria Decision Making*

*Business Ethics and Corporate Governance (UKM-GSB)*

*Information Management System (UKM-GSB)*

*Theory, Process and Practice of Entrepreneurship (FEP)*

*\*The first two courses (italicized) are compulsory.*

7	Syarat Kemasukan	<ol style="list-style-type: none"> <li>1. Ijazah sarjana muda dalam bidang berkaitan dengan PNGK minimum 2.50, atau yang setara dengannya, dari institusi pengajian tinggi yang diiktiraf oleh Senat Universiti; atau</li> <li>2. Ijazah sarjana muda dalam bidang berkaitan dengan PNGK minimum 2.00 hingga 2.49 atau yang setara dengannya, boleh diterima masuk tertakluk kepada minimum 5 tahun pengalaman bekerja atau penyelidikan dalam bidang yang berkaitan. Pembuktian pengalaman kerja calon luar negara perlu disahkan oleh Kedutaan negara masing-masing; atau</li> <li>3. Memenuhi Kelayakan Akreditasi Pembelajaran Berasaskan Pengalaman Terdahulu (APEL A) bagi calon warganegara sahaja; <ol style="list-style-type: none"> <li>a. Berumur sekurang-kurangnya 30 tahun pada tarikh permohonan; dan</li> <li>b. Memiliki kelayakan STPM atau Diploma dalam bidang berkaitan atau kelayakan lain yang setara yang diiktiraf oleh Kerajaan Malaysia dan diluluskan Senat Universiti; dan</li> <li>c. Memiliki Sijil Perakuan APEL MQA dengan Tahap 7 MQF.</li> </ol> </li> <li>4. Pelajar bukan warganegara perlu mendapat keputusan minimum TOEFL (iBT) skor 46 / IELTS band 5.5 / CEFR band B2 / MUET band 3 (Pelajar dari luar negara yang berasal dari negara yang Bahasa Inggeris adalah bahasa rasminya atau memiliki kelayakan akademik yang diperolehi dari mana-mana institusi pengajian tinggi yang menggunakan Bahasa Inggeris sebagai bahasa pengantar dikecualikan daripada IELTS / TOEFL / CERF / MUET); dan</li> <li>5. Memenuhi apa-apa syarat lain yang ditetapkan oleh Senat Universiti dari semasa ke semasa.</li> </ol> <p>A bachelor's degree in a related field with a minimum CGPA of 2.50, or equivalent, from a higher education institution recognized by the University Senate; or</p> <p>A bachelor's degree in a related field with a minimum GPA of 2.00 to 2.49 or its equivalent, may be admitted subject to a minimum of 5 years of work or research experience in a related field. Overseas candidates' work experience proof must be verified by the respective country's Embassy; or</p> <p>Meet the qualifications of Prior Experience-Based Learning Accreditation Qualification (APEL A) for Malaysian candidates only;</p> <ol style="list-style-type: none"> <li>a. Be at least 30 years old on the date of application; and</li> <li>b. Possess STPM qualification or Diploma in a related field or other equivalent qualifications recognized by the Malaysian Government and approved by the University Senate; and</li> <li>c. Possess an APPEL MQA Certification Certificate with MQF Level 7.</li> </ol> <p>International students must obtain a minimum result of TOEFL (iBT) score 46 / IELTS band 5.5 / CEFR band B2 / MUET band 3 (Foreign students from countries where English is the official language or have academic qualifications obtained from any higher education institutions that use English as the medium of instruction are exempt from IELTS / TOEFL / CERF / MUET); and</p>
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		Meet any other requirement set by the University Senate from time to time.
8	Lokasi & Maklumat Fakulti	<i>Faculty of Science and Technology School of Mathematical Sciences (PPSM) Universiti Kebangsaan Malaysia 43600 UKM, Bangi Selangor, MALAYSIA</i>
9	Sila Hubungi	Encik Syahir 017 250 2034 syahirhazmi@ukm.edu.my  Encik Aizat +60 13-992 5047 aizat.azmi@ukm.edu.my  Eksekutif PBJJ UKM 03-8921 3995 <a href="mailto:ekspbjj@ukm.edu.my">ekspbjj@ukm.edu.my</a>  Dr Mohd Aftar Abu Bakar 0389215784
10	Maklumat Tambahan	Any Professional Recognition Yes – ( ) No – ( )
11	Hasil Pembelajaran Program	
12	Faculty Expertise	Sila masukkan senarai nama pakar-pakar fakulti yang berkaitan dengan program Dr Mohd Aftar Abu Bakar