FUNCTIONAL DATA
ANALYTICS, B.S.

Begin Campus: Any Penn State Campus

End Campus: Erie, World Campus

Degree Requirements
For the Bachelor of Science degree in Functional Data Analytics, a minimum of 122 credits is required:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td>45</td>
</tr>
<tr>
<td>Requirements for the Major</td>
<td>93-98</td>
</tr>
</tbody>
</table>

18 of the 45 credits for General Education are included in the Requirements for the Major. This includes 3 credits of GH courses; 6 credits of GQ courses; 9 credits of GWS courses.

Per Senate Policy 83.80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of coursework in the major to be taken at the location or in the college or program where the degree is earned.

Requirements for the Major
Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

To graduate, a student enrolled in the major must earn a grade of C or better in each course designated by the major as a C-required course, as specified by Senate Policy 82-44 (https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/).

Code | Title                                      | Credits |
-----|--------------------------------------------|---------|
CAS 100 | Effective Speech                         | 3       |
DA 101 | Introduction to Data Analytics           | 3       |
DA 201W | Descriptive Analytics                    | 4       |
DA 301 | Diagnostic Analytics                     | 3       |
DA 302W | Predictive Analytics                    | 4       |
DA 401W | Prescriptive Analytics                   | 4       |
DA 402 | Qualitative Analytics                    | 3       |
DA 475 | Data Analytics Implementation Capstone I | 3       |
DA 476 | Data Analytics Implementation Capstone II | 3      |
DIGIT 410 | Data Visualization                    | 3       |
DIGIT/ GAMEREQUIREMENTS | Simulations of Human Behavior | 3       |
ENGL 202C | Effective Writing: Technical Writing      | 3       |
IST 230 | Language, Logic, and Discrete Mathematics | 3      |
MGMT 409 | Project Management for Engineers         | 3       |
MIS 415 | Social Media Management and Analytics    | 3       |
MIS 447 | Data Warehousing                         | 3       |
PHIL 103 | Ethics                                   | 3       |
STAT 184 | Introduction to R                         | 2       |

Additional Courses

<table>
<thead>
<tr>
<th>Additional Courses: Require a grade of C or better</th>
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</thead>
<tbody>
<tr>
<td>CMPSC 121</td>
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<tr>
<td>or CMPSC 131</td>
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<tr>
<td>DA 305</td>
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<tr>
<td>or DS 435</td>
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<tr>
<td>ENGL 15</td>
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<tr>
<td>or ENGL 30H</td>
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<tr>
<td>MATH 110</td>
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<tr>
<td>or MATH 140</td>
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<tr>
<td>MIS 336</td>
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<tr>
<td>or IST 210</td>
</tr>
</tbody>
</table>

Select 3-4 credits from the following: 3-4

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>DS 200</td>
<td>Introduction to Data Sciences</td>
</tr>
<tr>
<td>PSYCH 200</td>
<td>Elementary Statistics in Psychology</td>
</tr>
<tr>
<td>SCM 200</td>
<td>Introduction to Statistics for Business</td>
</tr>
<tr>
<td>STAT 200</td>
<td>Elementary Statistics</td>
</tr>
<tr>
<td>STAT 250</td>
<td>Introduction to Biostatistics</td>
</tr>
</tbody>
</table>

Supporting Courses and Related Areas
Select one special interest concentration from the program approve@2-16 list of concentrations.

Select 6 credits from any major field or course, except STAT 100, MATH 200, MATH 201, any ENGL course below ENGL 15, all KINES (GHW) courses, and any MATH course below MATH 83. Petitions for exceptions are available through the applicable program chair.

General Education
Connecting career and curiosity, the General Education curriculum provides the opportunity for students to acquire transferable skills necessary to be successful in the future and to thrive while living in interconnected contexts. General Education aids students in developing intellectual curiosity, a strengthened ability to think, and a deeper sense of aesthetic appreciation. These are requirements for all baccalaureate students and are often partially incorporated into the requirements of a program. For additional information, see the General Education Requirements (https://bulletins.psu.edu/undergraduate/general-education/baccalaureate-degree-general-education-program/) section of the Bulletin and consult your academic adviser.

The keystone symbol appears next to the title of any course that is designated as a General Education course. Program requirements may also satisfy General Education requirements and vary for each program.

Foundations (grade of C or better is required and Inter-Domain courses do not meet this requirement.)
- Quantification (GQ): 6 credits
- Writing and Speaking (GWS): 9 credits

Breadth in the Knowledge Domains (Inter-Domain courses do not meet this requirement.)
- Arts (GA): 3 credits
- Health and Wellness (GHW): 3 credits
- Humanities (GH): 3 credits
- Social and Behavioral Sciences (GS): 3 credits
- Natural Sciences (GN): 3 credits
Integrative Studies
• Inter-Domain Courses (Inter-Domain): 6 credits

Exploration
• GN, may be completed with Inter-Domain courses: 3 credits
• GA, GH, GN, GS, Inter-Domain courses. This may include 3 credits of World Language course work beyond the 12th credit level or the requirements for the student’s degree program, whichever is higher: 6 credits

University Degree Requirements
First Year Engagement
All students enrolled in a college or the Division of Undergraduate Studies at University Park, and the World Campus are required to take 1 to 3 credits of the First-Year Seminar, as specified by their college First-Year Engagement Plan.

Other Penn State colleges and campuses may require the First-Year Seminar; colleges and campuses that do not require a First-Year Seminar provide students with a first-year engagement experience.

First-year baccalaureate students entering Penn State should consult their academic adviser for these requirements.

Cultures Requirement
6 credits are required and may satisfy other requirements
• United States Cultures: 3 credits
• International Cultures: 3 credits

Writing Across the Curriculum
3 credits required from the college of graduation and likely prescribed as part of major requirements.

Total Minimum Credits
A minimum of 120 degree credits must be earned for a baccalaureate degree. The requirements for some programs may exceed 120 credits. Students should consult with their college or department adviser for information on specific credit requirements.

Quality of Work
Candidates must complete the degree requirements for their major and earn at least a 2.00 grade-point average for all courses completed within their degree program.

Limitations on Source and Time for Credit Acquisition
The college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. Credit used toward degree programs may need to be earned from a particular source or within time constraints (see Senate Policy 83-80 (https://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#83-80)). For more information, check the Suggested Academic Plan for your intended program.