Data Sciences, B.S. (Science)

Begin Campus: Any Penn State Campus
End Campus: University Park

Program Description
Data Sciences is an interdisciplinary field concerned with the integration of methods, processes, systems, and tools from Computer Science, Informatics, and Statistics, to discover, validate, and apply knowledge and actionable insights from data, across a broad range of application domains. The curriculum for the major is designed to equip students with the knowledge and the skills needed to elicit, formulate, and solve data sciences problems using modern computer science, informatics, and statistics tools for data management, machine learning, information integration, and predictive modeling, and effectively communicate their findings to a broad range of stakeholders. The students will gain the critical analytical skills needed to assess the feasibility, benefits, limitations, risks, and ethical implications of applying data sciences methods in different settings. Through experiences such as the capstone project, students should be prepared to function effectively as members of interdisciplinary data science teams to harness the potential of data to enable discovery, optimize products and processes, and inform public policy. The students in the major will specialize in one of the following options: applied, computational, or statistical modeling data sciences, as described below.

Applied Data Sciences (DATSC_BS)
Only available through the College of Information Sciences and Technology

This option focuses on the principles, methods, and tools for assembly, validation, organization, analysis, visualization, and interpretation of large and heterogeneous data, to support data-driven discovery and decision making, with emphasis on addressing pressing scientific, organizational, and societal challenges. A combination of required and elective courses provides students with the training and skills needed to develop advanced tools and domain-specific analyses that yield actionable knowledge from data. This option also provides critical analytical skills needed to assess the benefits and limitations of data analytics across a broad range of applications involving Big Data.

Computational Data Sciences (DTSCE_BS)
Only available through the College of Engineering

This option focuses on the computational foundations of the data sciences, including the design, implementation and analysis of software that manages the volume, heterogeneity and dynamic characteristics of large data sets and that leverages the computational power of multicore hardware. Students in this option will take upper-level courses in computer science and related fields to develop the skills necessary to construct efficient solutions to computational problems involving Big Data.

Statistical Modeling Data Sciences (DTSCS_BS)
Only available through the Eberly College of Science

This option focuses on statistical models and methods that are needed to discover and validate patterns in Big Data. Students in this option will take upper-level statistics and mathematics courses, learning to apply the theoretical machinery of quantitative models to the solution of real-world problems involving Big Data.

What is Data Sciences?
Data Sciences is a field that explores the methods, systems, and processes used to extract knowledge from data and turn these insights into discoveries, decisions, and actions. The emergence of massive amounts of data – also known as “big data” – found in our world through healthcare records, human sensors, digital media, and a number of other sources has increased the need for individuals who can obtain useful knowledge from big data and apply it to address major societal challenges across a variety of fields. Students pursuing this degree will develop the knowledge and skills needed to manage and analyze large-scale, unstructured data to address an expanding range of problems in industry, government, and academia.

MORE INFORMATION ABOUT DATA SCIENCES (https://ist.psu.edu/prospective/undergraduate/academics/data-sciences/)

You Might Like This Program If...
• You are curious about analyzing information to discover new insights.
• You want to apply data analytics to make strategic decisions.
• You want to understand how data can be used to visualize phenomena and predict different outcomes.
• You are interested in statistics, mathematics, and the social sciences, and want to combine these disciplines to understand what data is really telling us.

MORE INFORMATION ABOUT WHY STUDENTS CHOOSE TO STUDY DATA SCIENCES (https://ist.psu.edu/prospective/undergraduate/academics/data-sciences/)

Entrance to Major
To be eligible for entrance into the Data Sciences major, a degree candidate must satisfy requirements for entrance to the major.

Specific entrance requirements include:
1. The degree candidate must be taking, or have taken, a program appropriate for entry to the major as shown in the bulletin.
2. The degree candidate must complete the following entrance-to-major requirements: CMPSC 121* or CMPSC 131*, CMPSC 122* or CMPSC 132*, MATH 140*, MATH 141*, STAT 200* or DS 200*. These courses must be completed by the end of the semester during which the entrance to major process is carried out.

* Course requires a grade of C or better.

Degree Requirements
For the Bachelor of Science degree in Data Sciences, a minimum of 123 credits is required:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
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<tbody>
<tr>
<td>General Education</td>
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<tr>
<td>Electives</td>
<td>0-9</td>
</tr>
<tr>
<td>Requirements for the Major</td>
<td>75-84</td>
</tr>
</tbody>
</table>

6 of the 45 credits for General Education are included in the Requirements for the Major. This includes: 6 credits of GQ courses.
Requirements for the Major

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 (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#82-44).

Common Requirements for the Major (All Options)

<table>
<thead>
<tr>
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<tr>
<td></td>
<td><strong>Prescribed Courses</strong></td>
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</tr>
<tr>
<td>DS 435</td>
<td>Ethical Issues in Data Science Practice</td>
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<tr>
<td></td>
<td><strong>Additional Courses: Require a grade of C or better</strong></td>
<td></td>
</tr>
<tr>
<td>DS 220</td>
<td>Data Management for Data Sciences</td>
<td>3</td>
</tr>
<tr>
<td>DS 340W</td>
<td>Applied Data Sciences</td>
<td>3</td>
</tr>
<tr>
<td>MATH 140</td>
<td>Calculus With Analytic Geometry I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 141</td>
<td>Calculus with Analytic Geometry II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 220</td>
<td>Matrices</td>
<td>2</td>
</tr>
<tr>
<td>STAT 184</td>
<td>Introduction to R</td>
<td>2</td>
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<tr>
<td>STAT 380</td>
<td>Data Science Through Statistical Reasoning and Computation</td>
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<tr>
<td></td>
<td>1 credit of First-Year Seminar</td>
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<tr>
<td>DS 440</td>
<td>Data Sciences Capstone Course</td>
<td>3</td>
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<tr>
<td>or DS 440W</td>
<td>Data Science Capstone</td>
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<td></td>
<td><strong>Prescribed Courses: Require a grade of C or better</strong></td>
<td></td>
</tr>
<tr>
<td>CMPSC 121</td>
<td>Introduction to Programming Techniques</td>
<td>3</td>
</tr>
<tr>
<td>or CMPSC 131</td>
<td>Programming and Computation I: Fundamentals</td>
<td></td>
</tr>
<tr>
<td>CMPSC 122</td>
<td>Intermediate Programming</td>
<td>3</td>
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<tr>
<td>or CMPSC 132</td>
<td>Programming and Computation II: Data Structures</td>
<td></td>
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<tr>
<td>STAT/MATH 318</td>
<td>Elementary Probability</td>
<td>3</td>
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<tr>
<td>or STAT/ MATH 418</td>
<td>Introduction to Probability and Stochastic Processes</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Requirements for the Option</strong></td>
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<tr>
<td></td>
<td>Select an option</td>
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</table>

Requirements for the Option

Applied Data Sciences (DATSC_BS): 41 credits

Only Available through the College of Information Sciences and Technology

<table>
<thead>
<tr>
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<tr>
<td></td>
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<tr>
<td>DS 300</td>
<td>Privacy and Security for Data Sciences</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Prescribed Courses: Require a grade of C or better</strong></td>
<td></td>
</tr>
<tr>
<td>DS 200</td>
<td>Introduction to Data Sciences</td>
<td>4</td>
</tr>
<tr>
<td>DS 310</td>
<td>Machine Learning for Data Analytics</td>
<td>3</td>
</tr>
<tr>
<td>DS 320</td>
<td>Data Integration</td>
<td>3</td>
</tr>
<tr>
<td>DS 330</td>
<td>Visual Analytics for Data Sciences</td>
<td>3</td>
</tr>
<tr>
<td>DS/CMPSC 410</td>
<td>Programming Models for Big Data</td>
<td>3</td>
</tr>
<tr>
<td>IST 495</td>
<td>Internship</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>Additional Courses</strong></td>
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</tr>
<tr>
<td></td>
<td>Select 6 credits from any combination:</td>
<td>6</td>
</tr>
<tr>
<td>DS 402</td>
<td>Emerging Trends in the Data Sciences</td>
<td></td>
</tr>
<tr>
<td>DS 420</td>
<td>Network Analytics</td>
<td></td>
</tr>
<tr>
<td>DS/CMPSC 442</td>
<td>Artificial Intelligence</td>
<td></td>
</tr>
<tr>
<td>DS 494</td>
<td>Research Project</td>
<td></td>
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</tbody>
</table>

Additional Courses: Require a grade of C or better

Select 3 credits from the following:

- CMPSC 360 Discrete Mathematics for Computer Science
- IST 230 Language, Logic, and Discrete Mathematics
- MATH 311W Concepts of Discrete Mathematics

Supporting Courses and Related Areas

Select 12 credits from the lists of Application Focus courses in Appendix B; 6 credits must at least one 300- or 400-level course.

1 Students may apply up to 3 credits of ROTC as option Application Focus list credits and 3 credits of ROTC as GHW credits.

LIST OF APPLIED DATA SCIENCES COURSES (https://bulletins.psu.edu/undergraduate/colleges/information-sciences-technology/data-sciences-bs/#suggestedacademicplan)

Computational Data Sciences (DTSCE_BS): 47 credits

Only Available through the College of Engineering

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<td><strong>Prescribed Courses</strong></td>
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<tr>
<td>CMPSC 442</td>
<td>Artificial Intelligence</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 448</td>
<td>Machine Learning and Algorithmic AI</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 461</td>
<td>Programming Language Concepts</td>
<td>3</td>
</tr>
<tr>
<td>DS/CMPSC 410</td>
<td>Programming Models for Big Data</td>
<td>3</td>
</tr>
<tr>
<td>MATH 230</td>
<td>Calculus and Vector Analysis</td>
<td>4</td>
</tr>
<tr>
<td>STAT/MATH 414</td>
<td>Introduction to Probability Theory</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Prescribed Courses: Require a grade of C or better</strong></td>
<td></td>
</tr>
<tr>
<td>CMPSC 221</td>
<td>Object Oriented Programming with Web-Based Applications</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 360</td>
<td>Discrete Mathematics for Computer Science</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 465</td>
<td>Data Structures and Algorithms</td>
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</tr>
<tr>
<td>STAT/MATH 415</td>
<td>Introduction to Mathematical Statistics</td>
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</tr>
<tr>
<td></td>
<td><strong>Additional Courses</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Additional Courses: Require a grade of C or better</strong></td>
<td></td>
</tr>
<tr>
<td>DS 200</td>
<td>Introduction to Data Sciences</td>
<td>4</td>
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<tr>
<td>or STAT 200</td>
<td>Elementary Statistics</td>
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<tr>
<td></td>
<td><strong>Supporting Courses and Related Areas</strong></td>
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</tr>
<tr>
<td></td>
<td>Select 6 credits from Computational Option List A in Appendix C</td>
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</tr>
<tr>
<td></td>
<td>Select 6 credits from Computational Option List B in Appendix C</td>
<td></td>
</tr>
</tbody>
</table>

1 Students may apply up to 3 credits of ROTC as option list credits and 3 credits of ROTC as GHW credits.

LIST OF COMPUTATIONAL DATA SCIENCES COURSES (http://www.eecs.psu.edu/students/undergraduate/Data-Sciences.aspx)

Statistical Modeling Data Sciences (DTSCHS_BS): 38 credits

Only Available through the Eberly College of Science

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
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<tr>
<td></td>
<td><strong>Prescribed Courses</strong></td>
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</tr>
<tr>
<td>STAT/MATH 414</td>
<td>Introduction to Probability Theory</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Prescribed Courses: Require a grade of C or better</strong></td>
<td></td>
</tr>
<tr>
<td>MATH 230</td>
<td>Calculus and Vector Analysis</td>
<td>4</td>
</tr>
</tbody>
</table>
at University Park, and the World Campus are required to take 1 to 3
First Year Engagement
All students enrolled in a college or the Division of Undergraduate Studies

University Degree Requirements

requirement) (GHW, GQ, GN, GA, GWS, and GHW)
designated as a General Education course. Program requirements may
Inter-Domain or Approved Linked Courses:

A minimum of 120 degree credits must be earned for a baccalaureate
degree program 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

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 (http://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.

Program Learning Objectives
1. Understand the technical fundamentals of data sciences with a
focus on developing the knowledge and skills needed to manage and
analyze data to solve problems in our world.
   a. Integrate statistical concepts/methods and computational/
machine learning methods to discover the structure of data and
build predictive models.
   b. Apply the principles of data management to organize and use
different types of data, both structured and unstructured.
2. Identify, formulate and solve data science problems that arise in
various applications.
   a. Identify and incorporate relevant abstraction and domain
knowledge to formulate data science problems in different
application contexts.
   b. Design or adapt appropriate statistical, machine learning, and
other data science methods for solving specific problems.
   c. Compare, contrast, and evaluate competing data science
methods appropriate to the context of the problem.
   d. Employ modern computing infrastructure to scale up data
science methods for massive and complex data.
e. Integrate data from multiple sources while considering the best practices, challenges, and pitfalls of using heterogeneous data to solve problems.
3. Articulate the benefits, risks, formulation, solution, and results of data science projects to diverse stakeholders, including fellow data scientists, collaborators with subject matter expertise, and the general public, using written, verbal, and visual forms.
4. Participate effectively on teams in order to accomplish the goals of a project containing data science components.
5. Critically evaluate and conscientiously respond to the ethical and societal implications of data science practice.
   a. Analyze the potential human impacts of data-driven technologies, especially for marginalized communities.
   b. Develop strategies to solve data science problems that reflect shared social and ethical values, such as privacy, security, fairness, and accountability.
   c. Interpret and apply the ethical responsibilities of computing professionals.
   d. Ensure reproducibility of data science analyses.
6. Recognize the importance of continued learning beyond graduation.
   a. Demonstrate readiness to join an evolving professional community by participating in professional development, such as reading trade journals and engaging with appropriate professional organizations.
   b. Demonstrate readiness for independent learning by performing literature reviews and staying abreast of current trends within the field of data science.
7. Applied Data Sciences Option – Gain in-depth knowledge in a chosen application focus area and demonstrate skills to formulate and solve data science problems in the context of applications in that area.
   Computational Data Sciences Option – Design, development, and analysis of software (computational solutions) for data science problems.
   Statistical Modeling Data Sciences Option – Demonstrate facility with common regression-based inferential modeling techniques including analysis of variance, generalized linear models, multiple regression, and logistic regression, as well as proficiency in basic statistical optimization and simulation techniques.

**Academic Advising**

The objectives of the university’s academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of-class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee’s unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

**University Park**
Eberly College of Science
Undergraduate Statistics Office

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**Data Sciences, B.S. (Science)**

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**Suggested Academic Plan**

The suggested academic plan(s) listed on this page are the plan(s) that are in effect during the 2022-23 academic year. To access previous years’ suggested academic plans, please visit the archive (https://bulletins.psu.edu/undergraduate/archive/) to view the appropriate Undergraduate Bulletin edition (Note: the archive only contains suggested academic plans beginning with the 2018-19 edition of the Undergraduate Bulletin).

**Statistical Modeling Data Sciences: Data Sciences, B.S. at University Park Campus**

The course series listed below provides only one of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an Academic Requirements or What If report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

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<thead>
<tr>
<th>First Year</th>
<th>Credits</th>
<th>Spring Credits</th>
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<tbody>
<tr>
<td>MATH 140*</td>
<td>4</td>
<td>MATH 141*</td>
</tr>
<tr>
<td>PSU 16</td>
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<td>IST 210*</td>
</tr>
<tr>
<td>CMPSC 131*</td>
<td>3</td>
<td>CMPSC 132*</td>
</tr>
<tr>
<td>STAT 200*</td>
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<td>General Education Course 3</td>
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<th>Second Year</th>
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<td>STAT 380*</td>
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<tr>
<td>MATH 220*</td>
<td>2</td>
<td>MATH 462*</td>
</tr>
<tr>
<td>MATH 230*</td>
<td>4</td>
<td>STAT 414*</td>
</tr>
<tr>
<td>DS 220*</td>
<td>3</td>
<td>ENGL 202C</td>
</tr>
<tr>
<td>CAS 100</td>
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<td>General Education Course 3 (with IL or US)</td>
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<td><strong>Total</strong></td>
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<td><strong>15</strong></td>
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**Academic Advising**

323 Thomas Building
University Park, PA 16802
814-865-1348
stat-advising@psu.edu

**College of Engineering**

Alisha Simon
Academic Adviser
W360 Westgate Building
University Park, PA 16802
814-867-4436
anw114@psu.edu

**College of Information Sciences and Technology**

Undergraduate Academic Advising Center
E103 Westgate Building
University Park, PA 16802
814-865-8947
advising@ist.psu.edu

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**University Park**
Eberly College of Science
Undergraduate Statistics Office
### Third Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
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<tbody>
<tr>
<td>STAT/MATH 415*</td>
<td>3</td>
<td>List B Selection*</td>
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<tr>
<td>DS 300*</td>
<td>3</td>
<td>STAT 440*</td>
<td>3</td>
</tr>
<tr>
<td>DS 310 or CMPSC 448 (List B Selection)*</td>
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<td>MATH 311W or CMPSC 360*</td>
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<tr>
<td>General Education Course</td>
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<td>General Education Course</td>
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<td>Elective</td>
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<td><strong>Total</strong></td>
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### Fourth Year

<table>
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<tr>
<td>DS 340W*</td>
<td>3</td>
<td>DS 440*</td>
<td>3</td>
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<td>List A Selection*</td>
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<td>List A Selection*</td>
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<td><strong>Total</strong></td>
<td><strong>16.5</strong></td>
<td><strong>Total</strong></td>
<td><strong>16.5</strong></td>
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</table>

Total Credits 125

* Course requires a grade of C or better for the major
‡ Course requires a grade of C or better for General Education
# Course is an Entrance to Major requirement
† Course satisfies General Education and degree requirement

### University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy University Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

GWS, GQ, GHW, GN, GA, GH, and GS are abbreviations used to identify General Education program courses. General Education includes Foundations (GWS and GQ) and Knowledge Domains (GHW, GN, GA, GH, GS, and Integrative Studies). Foundations courses (GWS and GQ) require a grade of ‘C’ or better.

Integrative Studies courses are required for the General Education program. N is the suffix at the end of a course number used to designate an Inter-Domain course and Z is the suffix at the end of a course number used to designate a Linked course.

All incoming Schreyer Honors College first-year students at University Park will take ENGL 137H/CAS 137H in the fall semester and ENGL 138T/CAS 138T in the spring semester. These courses carry the GWS designation and replace both ENGL 30H and CAS 100. Each course is 3 credits.

### Advising Notes

List A Courses (6 credits required from this list)

- MATH 435 Basic Abstract Algebra
- MATH 436 Linear Algebra or MATH 441 Matrix Algebra

List B Courses (6 credits required from this list)

- MATH 451 Numerical Computations or MATH 455 Introduction to Numerical Analysis I
- MATH 484 Linear Programs and Related Problems
- MATH 416 Stochastic Modeling/STAT 416 Stochastic Modeling
- STAT 461 Analysis of Variance
- STAT 463 Applied Time Series Analysis
- STAT 466 Survey Sampling
- STAT 483 Statistical Programming in SAS

- DS 320 Data Integration
- DS 330 Visual Analytics for Data Sciences
- DS 410 Programming Models for Big Data
- DS 402 Emerging Trends in the Data Sciences
- IST 461 Database Management and Administration
- CMPSC 442 Artificial Intelligence
- CMPSC 465 Data Structures and Algorithms
Statistical Modeling Data Sciences: Data Sciences, B.S. at Commonwealth Campuses

The course series listed below provides only one of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an Academic Requirements or What If report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy University Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

GWS, GQ, GHW, GN, GA, GH, GS, and Integrative Studies. Foundations courses (GWS and GQ) require a grade of 'C' or better.

Integrative Studies courses are required for the General Education program. N is the suffix at the end of a course number used to designate an Inter-Domain course and Z is the suffix at the end of a course number used to designate a Linked course.

Advising Notes

List A Courses (6 credits required from this list)

- MATH 435 Basic Abstract Algebra
- MATH 436 Linear Algebra or MATH 441 Matrix Algebra
- MATH 451 Numerical Computations or MATH 455 Introduction to Numerical Analysis I
- MATH 484 Linear Programs and Related Problems
- MATH 416 Stochastic Modeling/STAT 416 Stochastic Modeling
- STAT 461 Analysis of Variance
- STAT 463 Applied Time Series Analysis
- STAT 466 Survey Sampling
- STAT 483 Statistical Programming in SAS

List B Courses (6 credits required from this list)

- DS 320 Data Integration
- DS 330 Visual Analytics for Data Sciences
- DS 410 Programming Models for Big Data
- DS 402 Emerging Trends in the Data Sciences
- IST 461 Database Management and Administration
- CMPSC 442 Artificial Intelligence
- CMPSC 465 Data Structures and Algorithms

Career Paths

Data Sciences blends the technical expertise needed to analyze, interpret, and manage big data with the interpersonal skills needed to communicate insights to a variety of audiences. The program prepares students to meet the growing need for professionals who have the analytical and problem-solving skills to address a wide range of societal challenges. Many companies participate in career fairs in Engineering, IST and Science with an express interest in hiring data science interns or graduates. A growing number of M.S. and Ph.D. programs await those who wish to pursue more advanced studies.

Careers

Because our courses blend technical knowledge with skills in communication and business, a Data Sciences degree allows students
to compete for leading-edge analytics positions across many different industry sectors. Possible careers include: Data Analyst, Data and Analytics Manager, Data Architect, Data Engineering, Data Visualizer, Statistician.

MORE INFORMATION FOR THE APPLIED DATA SCIENCES OPTION (https://www.ist.psu.edu/current/careers/development/process/path/)

MORE INFORMATION FOR THE COMPUTATIONAL DATA SCIENCES OPTION (http://www.eecs.psu.edu/students/undergraduate/Data-Sciences.aspx)

MORE INFORMATION FOR THE STATISTICAL MODELING DATA SCIENCES OPTION (https://science.psu.edu/stat/undergraduate-programs/)

Professional Resources

• Association for Computing Machinery (http://acm.psu.edu)
• Association for Information Science and Technology (http://www.asist.org)

Contact

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