

APPLIED DATA AND PREDICTIVE ANALYTICS, BPS

Contact

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Faculty List (<https://coursecatalog.syracuse.edu/undergraduate/professional-studies/#facultytext>)

Description

The Bachelor of Professional Studies in Applied Data and Predictive Analytics offers students broad skills in information systems, quantitative and qualitative analysis, and data graphics and visualization. Students will be able to interpret and translate data into market-ready, actionable information. Data analytics and visualization skills are highly prized in the global marketplace. This online bachelor's degree ties together the fields of computer science, management, and business intelligence to prepare budding analysts to derive insights from complex data.

Student Learning Outcomes

1. Collect, store, access, transform, and generate data by identifying and leveraging applicable technologies.
2. Create actionable insight across a range of contexts (e.g. societal, business, political), using tools, techniques, and data.
3. Communicate insights gained based on tools, techniques, and data enhancement methods.
4. Use programming languages such as R and Python to support the generation of actionable insight.

Program Requirements

| Code | Title | Credits |
|---|---|---------|
| Liberal Studies Core | | |
| The Liberal Studies Core gives a foundation in writing, language or quantitative skills, humanities, social science, natural science, and critical reflections. It draws upon lower-division courses in the College of Arts and Sciences. | | |
| <i>Writing</i> | | |
| WRT 105 | Studio 1: Practices of Academic Writing | 3 |
| WRT 205 | Studio 2: Critical Research and Writing | 3 |
| <i>Quantitative Skills</i> | | |
| Complete 6-8 credits of Quantitative Skills Sequence Requirement outlined in the Liberal Arts Core Guidebook. | | 6-8 |
| <i>Humanities</i> | | |
| Select six credits from any course listed in the Humanities Division of the Liberal Arts Core Guidebook. | | 6 |
| <i>Social Science</i> | | |

Select six credits from any course listed in the Social Sciences Division of the Liberal Arts Core Guidebook. 6

Natural Science

Select 3-4 credits from any course listed in the Natural Sciences Division of the Liberal Arts Core Guidebook. 3-4

Critical Reflections on Ethical & Social Issues

Select 3 credits from any course listed in the Critical Reflections on Ethical & Social Issues Division of the Liberal Arts Core Guidebook. 3

Students are required to select one Liberal Arts Core Course that meets the IDEA requirement

Professional Competencies Core

The Professional Competencies Core covers fundamental knowledge and abilities required in the modern workplace, such as ethics and critical thinking, problem solving, human relations, diversity and change management, budgeting and resource management, and teamwork. The Professional Competencies Core includes an introductory course, and a capstone experience required of all B.P.S. students. Designed to draw together issues from across the entire B.P.S. program, these courses summarize concepts covered in the curriculum and develop students' skills in strategic decision-making that looks to the future.

Required Courses

| | | |
|--------------------------------|--|----|
| BPS 144 | Orange Immersion | 2 |
| BPS 211 | Introduction to Professional Studies | 3 |
| BPS 411 | Senior Seminar | 3 |
| FYS 101 | First Year Seminar | 1 |
| Select seven of the following: | | 21 |
| ODL 303 | Introduction to Change Management | |
| BPS 315 | Practical Financial Management for the Working Professional | |
| ODL 425 | Design Thinking for Organizations | |
| ODL 335 | Conflict Management | |
| BPS 382 | Leading Cooperative Negotiations | |
| BPS 415 | Digital and Business Communications for Professional Studies | |
| ODL 313 | Strategic Leadership | |
| ODL 319 | Global Leadership | |
| CYB 233 | Introduction to Computer Networking and Cloud Computing for Professional Studies | |
| HCA 425 | Wellness Consciousness | |
| KNM 310 | Knowledge Capture and Codification | |
| LGL 201 | Introduction to Legal Systems and Legal Ethics | |
| LGL 210 | Legal Research and Writing | |
| LGL 403 | Business Organizations | |
| PPM 301 | Foundations of Project Management | |
| PPM 315 | Project Management Methodologies | |
| PPM 325 | Project Communications and Stakeholder Management | |
| PST 367 | Smart Cities and Urban Policy | |
| SCP 103 | Introduction to Computing Systems | |

Major Requirements

| | | |
|---------|---|---|
| AIA 427 | Sensor and IoT Data in Digital Automation | 3 |
| AIA 430 | Generative AI in Digital Automation | 3 |
| IST 343 | Data in Society | 3 |
| IST 387 | Introduction to Applied Data Science | 3 |

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|---|--|----------------|
| IST 407 | Data Mining | 3 |
| IST 414 | Data-Driven Inquiry | 3 |
| IST 418 | Big Data Analytics | 3 |
| IST 421 | Information Visualization | 3 |
| SCP 220 | Basic Principles of Computer Programming | 3 |
| SCP 305 | Database Management | 3 |
| Electives | | |
| Select 27-30 Credits (or as many needed to reach 120 credits) | | 27-30 |
| Total Credits | | 117-123 |

Note

The degree is administered by the College of Professional Studies. Each student should consult with their Academic Advisor to structure a plan for degree completion.

Undergraduate University Requirements

The following requirements and experiences apply to all Syracuse University Undergraduate matriculated degree programs.

- IDEA Course Requirement (<https://coursecatalog.syracuse.edu/undergraduate/idea-course-requirement/>)
- First Year Seminar (<https://coursecatalog.syracuse.edu/undergraduate/courses/fys/>)