

PROGRAMMING

SPS Certificate website: sps.northwestern.edu/undergraduate-certificate/programming/ (<https://sps.northwestern.edu/undergraduate-certificate/programming/>)

The Programming certificate helps students develop skills in programming. Working with Java, students learn how to program, how to meet the business requirements of enterprise design, software implementation, data needs and databases, and how information systems serve the larger goals of a business or organization.

Certificate Offered

- Programming, Certificate (<https://catalogs.northwestern.edu/sps/certificates/post-baccalaureate/programming/programming-certificate/>)

Programming Courses

CIS 212-DL Introduction to Object-Oriented Programming (1 Unit)

Introduction to core elements of object-oriented programming; transfer of those concepts into Java language. May not be audited or taken P/N.

Prerequisite: CIS 110-CN.

CIS 323-DL Python for Data Science (1 Unit)

Introduction to data science concepts, techniques, and tools with an emphasis on building practical business applications. May not be audited or taken P/N.

Prerequisite: CIS 110-DL.

CIS 324-DL Applied Data Science (1 Unit)

Introduction to data science concepts, techniques, and tools with an emphasis on building practical business applications. May not be audited or taken P/N.

Prerequisite: CIS 323-CN or equivalent.

CIS 385-DL Programming for the Web (1 Unit)

Introduction to the concepts, foundations, and components of programming for the web. May not be audited or taken P/N.