Computer Programming

Write programs for desktop applications, mobile apps, web applications, and video games by practicing coding, design, and debugging in multiple languages. Upon completion of the minor, students will have strong experience with the application of programming languages in several different contexts.

Skills
- C++, Java, and Python
- Object-oriented programming
- Software development
- Debugging

Careers
- Software Developer
- DevOps Engineer
- Web Developer
- Mobile Developer

Policies
- All minors at USC need **16 units** that only meet minor requirements and do not meet any other major, minor, or GE requirement.
- All courses completed for your minor or specialization must be completed for a **letter grade**.
- You must earn a **2.0 minimum** cumulative GPA in the courses completed for your minor or specialization.

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**Minor requirements**

**Core requirements (10 units):**
- ITP-115 “Programming in Python” (2 units)
- ITP-265 “Object-Oriented Programming” (4 units) [prerequisite: ITP-115]
- ITP-365 “Managing Data in C++” (4 units) [prerequisite: ITP-265]

**Electives (8 units):**
- ITP-303 “Full-Stack Web Development” (4 units) [prerequisite: ITP-265 or CSCI-103]
- ITP-341 “Android App Development” (4 units) [prerequisite: ITP-265 or CSCI-103]
- ITP-342 “iOS App Development” (4 units) [prerequisite: ITP-265 or CSCI-103]
- ITP-344 “Advanced iOS App Development” (4 units) [prerequisite: ITP-342]
- ITP-345 “Advanced Android App Development” (4 units) [prerequisite: ITP-341]
- ITP-368 “Programming Graphical User Interfaces” (4 units) [prerequisite: ITP-265 or CSCI-103]
- ITP-380 “Video Game Programming” (4 units) [prerequisite: ITP-365 or CSCI-104]
- ITP-435 “Professional C++” (4 units) [prerequisite: ITP-365 or CSCI-104]
- ITP-439 “Compiler Development” (4 units) [prerequisite: ITP-365 or CSCI-104]

**Specialization requirements**

**Core requirements (6 units):**
- ITP-115 “Programming in Python” (2 units)
- ITP-265 “Object-Oriented Programming” (4 units) [prerequisite: ITP-115]

**Elective (4 units):**
One course from the list of elective options above.

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**University of Southern California**

Contact:
- itpadvising@usc.edu
- itp.usc.edu
- Schedule appointment
Make sure you consult with your major advisor about how best to incorporate the requirements for your minor with your major and general education requirements. You must complete a pre-advisement course plan before scheduling an appointment with a minor advisor.