Information Technology Program

Computer Programming

USC Viterbi
School of Engineering

Introduction 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.

Careers
Software Developer
DevOps Engineer
Web Developer
Mobile Developer

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

Good to know The US Department of Labor projects a 24% growth in jobs for software developers between 2016 and 2026.

Related programs Mobile App Development, Video Game Programming, Web Technologies and Applications

Selecting courses Some courses in CSCI and EE satisfy the introductory programming course requirement — ask an ITP advisor for more information. An asterisk (*) next to a course name means that the course has a prerequisite.

Minor Requirements

MINIMUM UNITS: 17   **MINIMUM SEMESTERS: 4**

Complete one introductory programming course (2 units)

Course	Title	Units	✔
ITP-109	Introduction to Java Programming	2	
ITP-115	Programming in Python	2	
ITP-165	Introduction to C++ Programming	2	

Complete the following (3 units)

Course	Title	Units	✔
ITP-365	Managing Data in C++*	3	

Choose from the following electives (12 units)

Course	Title	Units	✔
ITP-303	Full-Stack Web Development*	4	
ITP-341	App Development for Phones and Tablets (Android)*	3	
ITP-342	Mobile Application Development (iOS)*	3	
ITP-345	Advanced App Development for Phones and Tablets (Android)*	4	
ITP-368	Programming Graphical User Interfaces*	3	
ITP-380	Video Game Programming*	4	
ITP-404	Modern Technologies of Web Development*	3	
ITP-435	Professional C++*	3	
ITP-439	Compiler Development*	3	

Specialization Requirements

MINIMUM UNITS: 11   **MINIMUM SEMESTERS: 3**

Complete one introductory programming course (2 units)

Course	Title	Units	✔
ITP-109	Introduction to Java Programming	2	
ITP-115	Programming in Python	2	
ITP-165	Introduction to C++ Programming	2	

Complete the following (3 units)

Course	Title	Units	✔
ITP-365	Managing Data in C++*	3	

Choose from the following electives (6 units)

Course	Title	Units	✔
ITP-303	Full-Stack Web Development*	4	
ITP-341	App Development for Phones and Tablets (Android)*	3	
ITP-342	Mobile Application Development (iOS)*	3	
ITP-345	Advanced App Development for Phones and Tablets (Android)*	4	
ITP-368	Programming Graphical User Interfaces*	3	
ITP-380	Video Game Programming*	4	
ITP-404	Modern Technologies of Web Development*	3	
ITP-435	Professional C++*	3	
ITP-439	Compiler Development*	3	

How to declare   In order to officially declare one of our minors or specializations, please schedule an appointment to meet with a member of our advisement team. During your appointment, you'll discuss the program requirements, create a course plan, and have the chance to ask any questions you may have. There is not an application, but you must be in good academic standing.

Curriculum and course offerings   Based on the availability of faculty, students and classroom space, we are able to offer a wide selection of courses every fall and spring semester. However, we are not always able to offer every course. If you are registering for your final semester and the course you need to graduate isn't offered, please contact our advisement team. Additionally, if there are any future changes to the curriculum on this document, students will be provided the option to follow: (a) the degree requirements in the catalogue current in their first term of enrollment after admission or readmission at USC or (b) degree requirements in a subsequent catalogue as long as they were enrolled in a term in which it was in effect.

ABOUT ITP

We offer a challenging, state-of-the-art education for those interested in learning about the dynamic and growing field of information technology (IT) — which includes computers, mobile apps, data analytics, smart devices, cyber security, and more.

Our classes offer students practical, hands-on experience with the latest tools, programming languages, and applications.

CONTACT INFORMATION

📞 **(213) 740-4542**

📍 **OHE 412**

🌐 **https://itp.usc.edu/**

✉️ **itpadvising@usc.edu**

Minor policies

- You must be an undergraduate student at USC in order to declare a minor.

- You must have a declared major in order to declare a minor.

- Each minor at USC requires that at least 16 units be unique to the minor and not count toward any other requirement, including GE, major, or another minor.

- All courses completed for a minor must be completed for a letter grade.

- A minimum cumulative 2.0 GPA must be achieved in the courses applied toward the minor requirements.

- Your minor will appear on your STARS report and your official transcript.

- Students who successfully complete a minor will receive a certificate upon graduation.

Specialization policies

- Specializations are available to undergraduate students, graduate students, and guests enrolled on a limited status basis.

- Undergraduate students must have a declared major in order to declare a specialization.

- All courses completed for a specialization must be completed for a letter grade.

- A minimum cumulative 2.0 GPA must be achieved in the courses applied toward the specialization requirements.

- Specializations do not appear on STARS reports or official transcripts.

- Students who successfully complete a specialization will receive a certificate upon completion.

USC Viterbi
Information Technology Program

3D Computer Graphics and Modeling

Applied Analytics

Applied Computer Security

Computer and Digital Forensics

Connected Devices and Making

Computer Programming

Innovation: The Digital Entrepreneur

Enterprise Information Systems

Mobile App Development

Video Game Design and Management

Video Game Programming

Web Technologies and Applications

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