

Connected Devices and Making

Introduction Write firmware and design hardware for smart devices that connect to computers, phones, and the web. Devices are now becoming data collection tools that can act, inform, and interface with many different aspects of our world — in the form of wearables, home automation systems, cutting-edge medical devices, and more.

 <p>Careers</p> <ul style="list-style-type: none"> Software Developer Hardware Engineer Data Analyst Product Designer Product Tester UX Designer 	 <p>Skills</p> <ul style="list-style-type: none"> C/C++ 3D printing Hardware design Firmware programming Data collection
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Good to know In 2017, vendors shipped over 100 million wearable connected devices — including smart watches, hybrid watches, and fitness trackers — worldwide.

Related programs 3D Computer Graphics and Modeling, Computer Programming, Mobile App Development

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: 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 (9 units)

ITP-228	Computer-Aided Modeling for 3D Product Design	2	
ITP-348	Introduction to Physical Computing*	3	
ITP-468	Connected Devices Project*	4	

Choose from the following electives (6 units)

ITP-250	Database Systems for Analytics	2	
ITP-251	Applied Statistics for Analytics	2	
ITP-341	App Development for Phones and Tablets (Android)*	3	
ITP-350	Technologies and Practices for Analytics*	4	
ITP-388	Developing Connected Devices*	3	
ITP-466	Building the High-Tech Startup	4	
ITP-476	Technologies for Interactive Marketing	4	

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