

# Software Engineering Process: A SWEBOK Knowledge Area

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# Purpose of Presentation

- Not primarily to promote certification
- Awareness of the CSDP certification
- Awareness of the related SWEBOK Guide
  - Very useful reference
  - Free of charge at [www.swebok.org](http://www.swebok.org)
- Overview of *Software Engineering Process*-- one “knowledge area” of the certification exam

# The Certification

- CSDP: “Certified Software Development Professional”.
- Similar: Certified Public Accountant, Project Management Professional, etc.
- Not tech-based, such as Cisco, Sun, Oracle, Microsoft, etc.
- The software engineering certification of the IEEE Computer Society. [www.computer.org](http://www.computer.org)
- Why is the word “engineer” missing?

# What is Certification?

- Institutions are accredited, individuals are certified.
- Certification is not licensure or registration.
- Certification is voluntary—neither a key nor a barrier to practice.
- Certification is peer recognition based on structured criteria.

# How to Become Certified

- Education: Baccalaureate degree (minimum)
- Experience: 9 000 hours of experience in at least 6 of the 11 knowledge areas
- Examination: based on the SWEBOK guide
- Continuing Education: via Professional Development Units (PDUs)
- Notably similar to certifications offered by PMI, ASQ, and others

# Knowledge Areas

- I. Professionalism and Engineering Economics (3-4%)
- II. Software Requirements (13-15%)
- III. Software Design (22-24%)
- IV. Software Construction (10-12%)
- V. Software Testing (15-17%)
- VI. Software Maintenance (3-5%)
- VII. Software Engineering Management (10-12%)
- VIII. Software Configuration Management (3-4%)
- IX. Software Engineering Process (2-4%)
- X. Software Engineering Tools and Methods (2-4%)
- XI. Software Quality (6-8%)

# Inside the SWEBOK Guide

- Similar to the PMBOK Guide—and others.
- We'll see:
  - A sub-topic breakdown of tonight's knowledge area, i.e. *coverage* of the Software Engineering Process knowledge area.
  - A matrix of references for each sub-topic.
  - Result: An effective roadmap for achieving breadth of learning on Software Engineering Process.

# Remainder of Presentation

- For tonight's attendees--
  - A walk-through of the SWEBOK Guide, *Software Engineering Process* knowledge area.
- For future readers of this presentation--
  - Visit [www.swebok.org](http://www.swebok.org) to download and inspect your own copy.
- For everybody--
  - Visit [www.c-spin.net](http://www.c-spin.net) for archived presentations.