



Certified Electronics Program Manager

SYLLABUS

INSTRUCTOR INFORMATION

INSTRUCTOR: SUSAN MUCHA

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PHONE: 915-585-7285

BEST TIME TO CALL: **2-4 pm**

PROGRAM DESCRIPTION

In the highly competitive electronics industry, the knowledge and skills of staff directly responsible for client services and program management can make or break the bottom line. The IPC Certified Electronics Program Manager (CEPM) Training and Certification course is designed to ensure that your team has the tools and training they need to provide the type of service that ensures clients for life. This instructor-led online course combines the educational benefits of live instruction and group discussions with the flexibility and cost-savings of e-learning. Taught by an IPC-certified industry expert with 30 years of experience in the field, the six-week program utilizes interactive webinars, on-demand recorded training, job-specific exercises, and team projects to facilitate mastery of the key business and technical concepts required of program managers in the electronics industry.

LEARNING AND PERFORMANCE OBJECTIVES

This program is designed to provide Program Managers with a balanced foundation of business skills and technical knowledge. Upon completion, participants will be able to:

- Identify variations in company structure and program management within the electronics industry
- Identify and address common challenges that impact customer relationships or program performance
- Implement industry best practices and tools for:
 - Project planning
 - Project performance measurement
 - Continuous improvement



- Explain the program manager's role in account acquisition
- Apply best practices in assessing project viability
- Illustrate sales and negotiating skills
- Assess areas of risk in program launch
- Apply best practices in ensuring efficient project management
- Employ strategies for setting and managing expectations with customers and EMS companies
- Create effective program reviews and account plans
- Describe basic cost accounting practices and the role of the program manager in measuring and controlling project costs
- Recognize the cost the cost impact of excess inventory, late shipments, excess scrap due to poor design or vendor quality problems, and slow paying customers
- Explain the concepts associated with accurate forecasting and inventory control
- Define basic contract terms and typical business risk associated with EMS projects
 - Apply best practices in negotiating these terms with customers
- Describe manufacturing processes and common manufacturing issues that can impact project quality and on-time delivery
- Identify the systems used in materials management within the EMS industry
- Demonstrate best practices in sales and negotiation skills
- Explain the principles behind building an effective team
- Demonstrate how to deal with difficult people and motivate personnel in support organizations
- Assess current competencies required in your segment of the EMS industry and develop a skills improvement plan

COURSE STRUCTURE

- Instructor and participants meet online twice per week from the comfort of their own home.
- Participants can view recorded online sessions to review course content and class discussions.
- Teams of participants apply key concepts to resolve a real-world issue each week.
- Participants complete weekly multiple-choice exams or role-playing modules to master concepts and practice skills in real-world contexts.
- All required materials are included in the course.
- Course materials are accessible 24/7 on the IPC Edge learning management system.
- The course can be accessed on virtually any device with an Internet connection and major web browser, including Chrome, Firefox, Safari, Edge, and Internet Explorer.

SUPPLEMENTAL MATERIALS

Mucha, S. E. (2008). *Find it, book it, grow it: A robust process for account acquisition in electronic manufacturing services*. Tulsa, OK: PennWell Books.

CEPM CERTIFICATION

Upon completing the CEPM course, participants who meet the education and experience requirements may sit for the CEPM Certification exam. Test candidates will have 2.5 hours to complete the 100-question, multiple-choice exam. Test candidates who do not obtain the 75% passing score on their first attempt will have one opportunity to re-take the exam at no additional cost. Test candidates must wait 30 days from the date of the initial exam to sit for the retake exam.

Course participants must contact IPC (certification@ipc.org) to schedule the date and time of the remotely proctored online CEPM certification exam. The exam must be completed no later than 6 months after completion of the CEPM course. Participants registered for the CEPM Exam ONLY will have 6 months from the date of registration approval to take the exam.

EDUCATION & EXPERIENCE REQUIREMENTS FOR CERTIFICATION

Program managers with minimal experience will find the curriculum extremely valuable and are encouraged to take the CEPM course. However, participants that want to sit for the CEPM Certification Exam must meet the following experience and educational requirements:

- Candidates *with* a 4-yr degree must have the following minimum level of work experience during the last five years:
 - 24 months in program management at an EMS company or 36 months combined in the fields of production control, planning, materials management, engineering or a senior position at an EMS company, **or**
 - 36 months at an OEM dealing directly with EMS partners
- Candidates *without* a 4-yr degree must have the following minimum level of work experience during the last five years:
 - 36 months in program management at an EMS company or 48 months combined in the fields of production control, planning, materials management engineering or a senior position at EMS company, **or**
 - Worked 48 months at an OEM dealing directly with EMS partners
- All candidates must submit a resume, related work experience, and references as part of the application process for the **certification exam**.

COURSE SCHEDULE

WEEK 1 – INTRODUCTION TO PROGRAM MANAGEMENT

Program overview outlining class schedule and options for accessing class material and assignments. Team assignments and an overview of the team learning concept and process for completing team assignments. Lecture 1 will focus on dimensions of program management including roles and responsibilities, and an overview of best practices in effective teams. Lecture 2 will focus on building strong customer relationships and addressing common program management challenges. Week 1 includes a supplemental team case study and Edge review material assignments. An overview of the case study method will be included.

TEAM ASSIGNMENT:

- Case Study 1 – Dealing with a Difficult Situation
 - Submit by Saturday of Week 1
 - Comment on at least two team’s case studies by Week 2, Lecture 1

INDIVIDUAL ASSIGNMENTS:

- Class Survey Form
 - Submit by Week 1, Lecture 1
 - Comment on at least two colleagues’ forms by Week 1, Lecture 1
- Edge Module: Best Practices in Customer Interaction
 - Complete by Saturday of Week 1/Prior to Week 2, Lecture 1

WEEK 2 – MAKING THE SALE

Program managers often find themselves heavily involved in sales activities. Lecture 1 will focus on account acquisition and program launch. Lecture 2 will focus on account cultivation and expectation setting.

TEAM ASSIGNMENT:

- Case Study 2 – Assessing Project Viability
 - Submit by Saturday of Week 2
 - Comment on at least two teams’ case studies by Week 3, Lecture 1

INDIVIDUAL ASSIGNMENT:

- Week 2 Multiple Choice Test
 - Complete by Week 2, Lecture 2

WEEK 3 – THE BUSINESS OF PROGRAM MANAGEMENT



Strong focus on the drivers of cost within each program. Lecture 1 will focus on an overview of cost accounting principles, program cost tracking examples, drivers of typical cost overruns in projects, calculating contribution margin and the program manager's role in managing and mitigating cost increases. Lecture 2 will focus on materials and logistics including the use of ERP/MRP systems and other material management techniques, purchasing within the EMS industry, and inventory management and control systems.

TEAM ASSIGNMENT:

- Case Study 3 – Analyzing Program Potential for Profitability
 - Submit by Saturday of Week 3
 - Comment on at least two teams' case studies by Week 4, Lecture 1

INDIVIDUAL ASSIGNMENT:

- Edge Module: Program Management Toolkit
 - Review by Week 3, Lecture 1
- Week 3 Multiple Choice Test 1
 - Complete by Week 3, Lecture 2
- Week 3 Multiple Choice Test 2
 - Complete by Week 4, Lecture 1

WEEK 4 – CONTRACTS

Assessing and/or negotiating contracts are often a critical part of the program manager's job description. Members from the firm of Fees & Burgess with decades of experience in the electronics industry will provide a complete overview of contracts including agreement types, pricing validity, contract termination, changes, warranties, and liabilities.

TEAM ASSIGNMENT:

- Case Study 4 – Managing Contracts and Documentation
 - Team Case Study response is due by 10 pm on Saturday of Week 4
 - Student comments on two other Case Study responses are due prior to Week 5, Lecture 1

INDIVIDUAL ASSIGNMENT:

- Review Supplemental Handout prior to Week 4, Lecture 1

WEEK 5 – THE ELECTRONICS MANUFACTURING CYCLE

An overview of the manufacturing process designed to provide students with basic familiarity with processes and issues they may be discussing with customers. Lecture 1 will focus on common components; work-in-process (WIP), cycle time, throughput and capacity; production

planning, scheduling and activity control; and flow in electronic manufacturing processes. Lecture 2 will focus on demand variability, Lean manufacturing and core quality principles.

TEAM ASSIGNMENT:

- Case Study 4 – Addressing Demand Variability
 - Submit by Saturday of Week 5
 - Comment on at least two teams' case studies by Week 6, Lecture 1

INDIVIDUAL ASSIGNMENT:

- Week 5 Multiple Choice Test
 - Complete by Week 5, Lecture 2

OPTIONAL INDIVIDUAL ASSIGNMENTS:

- Edge Module Videos:
 - Component Identification
 - Overview of Electronics Assembly

WEEK 6 – LEADERSHIP

Program managers are often required to direct teams that report elsewhere in the organization. Lecture 1 will focus on an introduction to the concept of leadership, basic management and motivation theories and common leadership challenges. Lecture 2 will focus on best practices in leading effective teams and include a wrap-up of course concepts

TEAM ASSIGNMENT:

- Case Study 5 – Motivating the Program Team
 - Submit before Thursday class, Week 6

INDIVIDUAL ASSIGNMENTS:

- Skills Improvement List
 - Submit by Week 6, Lecture 2
- Branched Learning Exercise 1 – Interpersonal Skills
 - Complete by Week 6, Lecture 2
- Branched Learning Exercise 2 – Effective Delegation
 - Complete by Saturday of Week 6

FINAL EXAM:

- Complete CEPM Certification Exam