



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Product Quality Planning (APQP)

### Course

Field of study

Management and Production Engineering

Area of study (specialization)

Production systems

Level of study

Second-cycle studies

Form of study

part-time

Year/Semester

2/4

Profile of study

general academic

Course offered in

Polish

Requirements

elective

### Number of hours

Lecture

8

Laboratory classes

8

Other (e.g. online)

Tutorials

Projects/seminars

### Number of credit points

2

### Lecturers

Responsible for the course/lecturer:

Dr. Magdalena DIERING

Responsible for the course/lecturer:

email: Magdalena.Diering@put.poznan.pl

ph. +48 616652738

Faculty of Mechanical Engineering

Piotrowo 3, 60-965 Poznan, Poland

### Prerequisites

Knowledge of issues in the field of quality management, knowledge of the basics of project management. Student has IT skills - knowledge of MS Office. The student has the skills of logical thinking, the use of information obtained from the library and the Internet. Social competences - the student understands the need to learn and acquire new knowledge; can work in a team; recognizes the possibilities of continuous improvement in various areas of life, including the activities of organizations, with particular emphasis on manufacturing enterprises.

### Course objective

To familiarize the student with the methodology of advanced product quality planning - APQP.



## Course-related learning outcomes

### Knowledge

Student knows the stages of the APQP methodology and PPAP actions. The student knows the process FMEA method. The student knows what a control plan is.

### Skills

The student knows how to develop APQP project documentation - 18 elements of PPAP.

The student knows how to develop a "quality trilogy" for a selected product and process - Process Flow Chart, pFMEA, Control Plan.

### Social competences

The student is aware of the effects of engineering activities in both technical and non-technical areas. The student is aware of the effects of decisions and responsibility for decisions.

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

### Formulation assessment:

Lecture – Evaluation based on answers to questions about the material discussed in the previous lectures.

Laboratory – Evaluation based on assessment of current progress of tasks

### Summary assessment:

Lecture – Examination on the basis of a colloquium consisting of 8 general questions (credit in the case of a correct answer to at least 4 questions (each question for 1 point): 3 points and less – Not credited, 4 - Satisfactory, 5 – Satisfactory plus, 6 - Good, 7 – Good plus and 8 – Very good. Credit – during the last lecture (at the end of the semester). Discussion the results of the exam.

Laboratory exercises: performing problem tasks, solving tasks, discussion, working in a team.

## Programme content

### Lecture:

1. AIAG Core Tools – guidebooks.
2. Stages of APQP methodology.
3. APQP trilogy (Process Flow-Chart, FMEA and CP).
4. Part Approval Process (PPAP).
5. APQP and PPAP documentation.
6. Practical guidelines for conducting APQP projects in the company.



Laboratory:

Development of selected elements of APQP project documentation (APQP trilogy).

### Teaching methods

Lecture: multimedia presentation illustrated with examples given on the board, discussion.

Laboratory exercises: performing problem tasks, solving tasks, discussion, working in a team.

### Bibliography

Basic

1. Advanced Product Quality Planning And Control Plan, 2nd ed., Reference manual, AIAG-Work Group, Daimler Chrysler Corporation, Ford Motor Company, General Motors Corporation, 2008.
2. Measurement System Analysis, 4th ed., Reference manual, AIAG-Work Group, Daimler Chrysler Corporation, Ford Motor Company, General Motors Corporation, 2010.

Additional

1. AIAG & VDA FMEA Handbook, 2019.
2. Production Part Approval Process (PPAP). Reference Manual. 4th Editon. AIAG 2006.
3. Adam Hamrol, Strategie i praktyki sprawnego działania, Wyd. PWN, Warszawa 2015.

### Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	16	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam) <sup>1</sup>	34	1,0

<sup>1</sup> delete or add other activities as appropriate