Name of module: Tolerancing (GD&T)

Keywords: Datum, Dimension, Tolerance, geometrical product specification, GPS, size, tolerance analysis

Module number: Not compulsory

Target groups: 4 – 7 Semester, exchange students

ECTS-Credits: 2

Language of instruction: English

Module owner: Prof. Dr.-Ing. Horst Haberhauer

Date of last change: 30.08.2013

Extent of work (hours)

<table>
<thead>
<tr>
<th>Workload</th>
<th>Contact hours</th>
<th>Self study</th>
<th>Exam preparation</th>
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<tr>
<td>60</td>
<td>25</td>
<td>25</td>
<td>10</td>
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Prerequisites: Basic knowledge about tolerancing

Total target: It is estimated that 80% of all manufacturing issues are directly related to improper use of GD&T. After the lecture students have strengthened their understanding of tolerance calculation and are able to apply the state-of-the-art according to ISO-tolerance system and tolerance calculations.

Module number: Not compulsory

Module content:

- New tolerancing standards
  - Geometry Product specification
  - Consequences of new ISO 14405 and 8015
- Dimension and geometry tolerances
- Datums and datum systems
- Tolerancing principles
- Maximum and minimum requirements
- Arithmetical and statistical tolerance calculation
- Determinations of tolerances depend on function, production, checking
- Case studies

Reference material: Lecture notes

Offered: Every semester

Relevance for other study programs: Automotive Engineering

Submodules and assessments

Title of submodule: Tolerancing (GD&T)

Type of instruction / form of learning: Lectures, practices and exam preparation

Hours per week: 2

Target groups: 4 – 7 Semester, exchange students

Aims, learning outcomes: See above

Estimated student workload: 60 h

Type of assessment: Term paper and written exam (60 min)