



Annex SFB

Studienfachbeschreibung (subject description, SFB) for the subject Aerospace Computer Science as a Bachelor's with 1 major with the degree "Bachelor of Science" (180 ECTS credits)

Responsible: Faculty of Mathematics and Computer Science Responsible: Institute of Computer Science Examination regulations version: 2020 Examination regulations version: 2020

| Abbreviations used: | Course types: \mathbf{E} = field trip, \mathbf{K} = colloquium, \mathbf{O} = conversatorium, \mathbf{P} = placement/lab course, \mathbf{R} = project, \mathbf{S} = seminar, \mathbf{T} = tutorial, $\ddot{\mathbf{U}}$ = exercise, \mathbf{V} = lecture |
|--|---|
| | Term: SS = summer semester, WS = winter semester |
| | Methods of grading: NUM = numerical grade, B/NB = (not) successfully completed |
| | Regulations: (L)ASPO = general academic and examination regulations (for teaching-degree programmes), FSB = subject-specific provisions, SFB = list of modules |
| | Other: A = thesis, LV = course(s), PL = assessment(s), TN = participants, VL = prerequisite(s) |
| Conventions for the modules in this SFB: | Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not cre- ditable for bonus. |
| Information on assessment procedures: | Should there be the option to choose between several methods of assessment, the lecturer will agree with the module coordinator on the me- thod of assessment to be used in the current semester by two weeks after the start of the course at the latest and will communicate this in the customary manner. |
| | Should a module comprise more than one graded assessment, all assessments will be equally weighted, unless otherwise stated below. |
| | Should the assessment comprise several individual assessments, successful completion of the module will require successful completion of all individual assessments. |
| | |

In accordance with the general regulations governing the degree subject described in this module catalogue:

ASPO2015

associated official publications (FSB (subject-specific provisions)/SFB (list of modules)):

18-Dec-2019 (2019-61)

This module handbook seeks to render, as accurately as possible, the data that is of statutory relevance according to the examination regulations of the degree subject. However, only the FSB (subject-specific provisions) and SFB (list of modules) in their officially published versions shall be legally binding. In the case of doubt, the provisions on, in particular, module assessments specified in the FSB/SFB shall prevail.

Every module will be described using the following form:

| Abbreviation | Module title | | | | | | | | | | |
|--------------|------------------------------|--------------------------------------|---------|--|--|-------------------|--|--------------|--|--|--|
| | ECTS | | Durati | ion | (in semesters) | Method of grading | | Module level | | | |
| | Courses | | | To be spe | To be specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y | | | | | | |
| | Method of as | ssessn | nent | | | | | | | | |
| | Only after su completion of | only after successful i ompletion of | | | ble | | | | | | |
| | Other prereq | Other prerequisites | | | if applicable | | | | | | |
| | Participants on of places | and al | locati- | if applicable | | | | | | | |
| | Additional in | nformat | tion | if applica | ble | | | | | | |
| | Referred to in | Referred to in LPO I | | if applicable (examination regulations for teaching-degree programmes) | | | | | | | |

| Compulsory Course | es (114 E | CTS crea | lits) | | | | | | | | |
|-------------------|---|-----------|----------|--|---|-----------------------|---------------|-------------|---------------|--|--|
| Aerospace Science | Aerospace Science and Engineering (26 ECTS credits) | | | | | | | | | | |
| 10-I-LFS-172-m01 | Introdu | iction to | Aviation | Syste | ms | | | | | | |
| | ECTS | 5 | Duration | l | 1 semester | Method of grading nun | nerical grade | Modul level | undergraduate | | |
| | Course | S | | V (2) · | / (2) + Ü (1) | | | | | | |
| | Method of assessment | | | written examination (approx. 60 to 120 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 30 minutes). creditable for bonus | | | | | | | |
| | Referre | d to in L | PO I | § 22 | l Nr. 3 b) | | | | | | |
| 10-I-RFS-172-m01 | Introdu | iction to | Space S | ystem | 5 | | | | | | |
| | ECTS | 5 | Duration | า | 1 semester | Method of grading nun | nerical grade | Modul level | undergraduate | | |
| | Course | S | | V (2) · | (2) + Ü (1) | | | | | | |
| | Method | d of asse | essment | writte If ann of one credit | f announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 30 minutes). creditable for bonus | | | | | | |
| | Referre | d to in L | PO I | § 22 | l Nr. 3 b) | | | | | | |
| 10-I-LRFB-172-m01 | Spaced | raft Ope | rations | | | | | | | | |
| | ECTS | 10 | Duration | 1 | 1 semester | Method of grading nun | nerical grade | Modul level | undergraduate | | |
| | Course | S | | V (4) + U (2) | | | | | | | |
| | Method of assessment | | | written examination (approx. 180 to 240 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 30 minutes). creditable for bonus | | | | | | | |
| 10-I-LMT-172-m01 | Measu | rement 1 | ſechniqu | e | | | | | | | |
| | ECTS | 6 | Duration | 1 | 1 semester | Method of grading num | nerical grade | Modul level | undergraduate | | |
| | Course | S | | V (3) · | + Ü (2) | | | | | | |
| | Methoo | d of asse | essment | written examination (approx. 180 to 240 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 30 minutes). creditable for bonus | | | | | | | |

| Informatics (49 ECT | formatics (49 ECTS credits) | | | | | | | | | | | |
|---------------------|-----------------------------|----------|----------------------------------|---|---|-----------------------|---------------------------------|-----------------|-----------------------|--|--|--|
| 10-I-ADS-152-m01 | Algorit | hms an | d data str | ucture | 5 | | | | | | | |
| | ECTS | 10 | Duratio | n | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Course | S | | V (4) - | √ (4) + Ü (2) | | | | | | | |
| | Method of assessment | | | writte If ann of one date). credit | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). creditable for bonus | | | | | | | |
| | Referred to in LPO I | | | § 49 § 69 | § 49 Nr. 1 a) § 69 Nr. 1 a) | | | | | | | |
| 10-I-GdP-172-m01 | Fundan | nentals | of Progra | mming | 5 | | | | | | | |
| | ECTS | 5 | Duration | 1 | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Courses | | | V (2) - | (2) + U(2) | | | | | | | |
| | Method of assessment | | | If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). creditable for bonus | | | | | | | | |
| | Referred to in LPO I | | | § 49 I § 69 I | § 49 Nr. 1 b) § 69 Nr. 1 b) | | | | | | | |
| 10-I-MEC-172-m01 | Fundan | nentals | tals and Programming of Avionics | | | | | | | | | |
| | ECTS | 10 | Duration | n | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Course | S | | V (4) - | - Ü (2) + P (2) | | | | | | | |
| | Method of assessment | | | writte each) credit | written examination (approx. 120 minutes) and practical examination (approx. 6 programming exercises approx. 4 hours each), weighted 1:1 creditable for bonus | | | | | | | |
| 10-I-BDV-152-m01 | On boa | rd data | processi | ng | | | | | | | | |
| | ECTS | 8 | Duration | n | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Course | S | | V (4) - | - Ü (2) | | | | | | | |
| | Method | d of ass | essment | writte credit | n examination (appr able for bonus | rox. 120 minutes) and | approx. 6 practical exercises (| approx. 4 hours | s each), weighted 1:1 | | | |

| 10-I-AR-152-m01 | Autom | ation an | d Control | Techn | ology | | | | | | | |
|-------------------------------|--|-----------|-------------|---|--|------------------------|--|-----------------|----------------------------------|--|--|--|
| | ECTS | 8 | Duration | 1 | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Course | S | | V (4) + | + Ü (2) | • | | | | | | |
| | Metho | d of ass | essment | writte | n examination (appi | rox. 60 to 120 minute | s). | | | | | |
| | | | | lf ann | ounced by the lectu | rer at the beginning o | of the course, the written exami | nation may be | replaced by an oral examination | | | |
| | | | | of one | e candidate each (ap | prox. 20 minutes) or | an oral examination in groups | of 2 candidates | s (approx. 15 minutes per candi- | | | |
| | | | | l angu | age of assessment. | German and/or Engl | ish | | | | | |
| | | | | credit | reditable for bonus | | | | | | | |
| | Referre | d to in L | POI | § 22 | 2 II Nr. 3 b) | | | | | | | |
| 10-I-HMR-152-m01 | Practical Measurement and Control System Engineering | | | | | | | | | | | |
| | ECTS | 8 | Duration | n | 1 semester | Method of grading | (not) successfully completed | Modul level | undergraduate | | | |
| | Course | s | | P (6) | • | | | | • | | | |
| | Method of assessment project with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages) | | | | | | | | | | | |
| Mathematics (20 ECTS credits) | | | | | | | | | | | | |
| 10-M-LRI1-152-m01 | 11-152-mo1 Mathematics 1 for students of Space- and Aerospace Computer Science | | | | | | | | | | | |
| | ECTS | 10 | Duration | n | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Course | S | | V (5) + | + Ü (2) | | | | | | | |
| | | | | Modu | Module taught in: U: German or English | | | | | | | |
| | Metho | d of ass | essment | a) written examination (approx. 90 to 120 minutes, usually chosen) or | | | | | | | | |
| | | | | c) ora | l examination of one | e candidate each (ap | prox. 20 minutes) or ninutes per candidate) | | | | | |
| | | | | Langu | lage of assessment: | German and/or Engl | ish | | | | | |
| | | | | credit | creditable for bonus | | | | | | | |
| 10-M-LRI2-152- | Mathe | matics 2 | 2 for stude | ents of | Space- and Aerospa | ace Computer Scienc | 6 | | | | | |
| m01 | ECTS | 10 | Duration | n | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Course | S | | V (5) + | + Ü (2) | | | | | | | |
| | | | <u>.</u> | Modu | le taught in: Ü: Gern | nan or English | | | | | | |
| | Metho | d of ass | essment | a) writ | tten examination (ap | prox. 90 to 120 minu | ites, usually chosen) or | | | | | |
| | | | | b) ora | l examination of one | e candidate each (ap | prox. 20 minutes) or | | | | | |
| | | | | l angu | lage of assessment. | German and/or Fngl | ish | | | | | |
| | | | | credit | able for bonus | | | | | | | |

| Basics of Physics (: | Basics of Physics (19 ECTS credits) | | | | | | | | | | | |
|----------------------|-------------------------------------|-----------|--------------|---|---|-------------------|-----------------|-------------|---------------|--|--|--|
| 11-ENNF1-152-m01 | Class | ical Phys | sics 1 for S | tuden | ts of Physics relate | d Disciplines | | | | | | |
| | ECTS | 7 | Duration | n | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Cours | ses | | V (4) · Modu | $\sqrt{(4) + \ddot{U}(2)}$ | | | | | | | |
| | Meth | od of ass | essment | writte | written examination (approx. 120 minutes) | | | | | | | |
| | Meth | | | Langi | Language of assessment: German and/or English | | | | | | | |
| | other | prerequi | isites | Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester. | | | | | | | | |
| | Additional Information | | | Regis consi neral the qu stude for an sessn will n | Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered. | | | | | | | |
| 11-ENNF2-152-m01 | Class | ical Phys | sics 2 for S | Studen | ts of Physics relate | d Disciplines | | | | | | |
| | ECTS | 7 | Duration | n | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Cours | ses | | V (4) + Ü (2) Module taught in: Ü: German or English | | | | | | | | |
| | Meth | od of ass | sessment | written examination (approx. 120 minutes) Language of assessment: German and/or English | | | | | | | | |
| | other | prerequi | isites | Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester. | | | | | | | | |
| | Additional Information | | | Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered. | | | | | | | | |

| 11-P-PA-152-m01 | Laboratory Co | Laboratory Course Physics A (Mechanics, Heat, Electromagnetism) | | | | | | | | | | |
|------------------|---|---|---|--|--|--|--|--|--|--|--|--|
| | ECTS 3 | Duration | 1 semester | Method of grading (not) successfully completed Modul level undergraduate | | | | | | | | |
| | Courses | I | P (2) | | | | | | | | | |
| | Method of ass | essment | practical assignment with talk (approx. 30 minutes) | | | | | | | | | |
| | | | Preparing, performing and evaluating (record of readings or lab report) the experiments will be considered successfully com- | | | | | | | | | |
| | completion of all experiments, talk (with discussion; approx. 30 minutes) to test the candidate's understance | | | | | | | | | | | |
| | | t | sics-related contents of the module. Talks that were not successfully completed can be repeated once. Both components of the assessment have to be successfully completed. | | | | | | | | | |
| 11-P-FR1-152-m01 | Data and Error Analysis | | | | | | | | | | | |
| | ECTS 2 | Duration | 1 semester | Method of grading (not) successfully completed Modul level undergraduate | | | | | | | | |
| | Courses | | $V(1) + \ddot{U}(1)$ | | | | | | | | | |
| | | | Module taught in: U: Ger | erman or English | | | | | | | | |
| | Method of ass | essment | Language of assessment: German and/or English | | | | | | | | | |
| | other prerequi | sites / | Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester. | | | | | | | | | |
| | Additional Info | rmation | Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered. | | | | | | | | | |
| | Referred to in I | POI | § 53 Nr. 1 c) § 77 Nr. 1 d) | | | | | | | | | |

| Compulsory Electiv | es (34 ECTS cr | edits) | | | | | | | | |
|---------------------------|--|----------------|---|--|--|--|--------------------------|--------------------------------------|--|--|
| Numerical Mathem | atics and Prog | ramming (| 10 ECTS credits | 5) | | | | | | |
| 10-I-PP-191-m01 | Practical Cour | rse in Prog | amming | | | | | | | |
| - | ECTS 10 | Duration | 1 | | Method of grading | (not) successfully completed | Modul level | undergraduate | | |
| | Courses | | P (6) | | | | 8 | | | |
| | Method of ass | sessment | practical examination (programming exercises, approx. 240 hours) and written examination (approx. 60 to 120 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). | | | | | | | |
| | other prerequ | isites | Intended learn this before. | ning outcom | es of the following m | nodule are required: 10-I-GdP. | It is therefore st | rongly recommended to complete | | |
| | Referred to in | LPO I | § 49 Nr. 1 c) § 69 Nr. 1 d) | | | | | | | |
| 10-M-NUM1af-152- | Numerical Ma | thematics | 1 for students | of other sub | ojects | | | | | |
| m01 | ECTS 10 | Duration | n 1 seme | ster | Method of grading | numerical grade | Modul level | undergraduate | | |
| | Courses | | V (4) + Ü (2) | | | | | | | |
| | | | b) oral examin c) oral examin Language of a creditable for | ation of one ation in grou ssessment: bonus | e candidate each (15 ups (groups of 2, 10 German and/or Engl | to 30 minutes) or to 15 minutes per candidate) ish | | | | |
| 10-M-NUM2af-152- | Numerical Mathematics 2 for students of other subjects | | | | | | | | | |
| m01 | ECTS 10 | Duration | ו 1 seme | ster | Method of grading | numerical grade | Modul level | undergraduate | | |
| | Courses | | V (4) + Ü (2) | | | | | | | |
| | Method of assessment | | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus | | | | | | | |
| Other topics (24 EC | TS credits) | | | | | | | | | |
| 10-l-RlÜ-191-m01 | Computer Net | works and | Information T | ransmission | | | | | | |
| | ECTS 10 | Duration | 1 1 seme | ster | Method of grading | numerical grade | Modul level | undergraduate | | |
| | Courses | | V (4) + Ü (2) | | | | | | | |
| | Method of ass | sessment | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). creditable for bonus | | | | | | | |
| | Referred to in | LPO I | § 22 II Nr. 3 b) | , § 69 Nr. 1 | c) | | | | | |
| Bachelor's with 1 major A | erospace Computer S | Science (2020) | | | | JMU Würzburg • generated 19-Apr- | 2025 • exam. reg. data i | record 82 f25 - - H 2020 page 8 / 15 | | |

| 10-I-AGT-152-m01 | Algorithmic G | raph Theo | ry | | | | | | | | |
|------------------|------------------|-----------|---|--|-------------------|-----------------|-------------|---------------|--|--|--|
| | ECTS 5 | Duratio | n | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Courses | | V (2) - | + Ü (2) | | · | • | | | | |
| | Method of ass | essment | writte If ann of one date). Langu credit | Itten examination (approx. 60 to 120 minutes). Innounced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- te). nguage of assessment: German and/or English editable for bonus | | | | | | | |
| | Referred to in I | LPO I | § 22 | 3 22 II Nr. 3 b) | | | | | | | |
| 10-I-WBS-152-m01 | Knowledge-ba | sed Syste | ems | | | | | | | | |
| | ECTS 5 | Duratio | n | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Courses | - | V (2) - | + Ü (2) | | | | • | | | |
| | Method of ass | essment | ssment written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus | | | | | | | | |
| | Referred to in I | LPO I | § 22 | l Nr. 3 b) | | | | | | | |
| 10-I-DM-152-m01 | Data Mining | | | | | | | | | | |
| | ECTS 5 | Duratio | n | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Courses | | V (2) - | + Ü (2) | | | | | | | |
| | Method of ass | essment | writte If ann of one date). Langu credit | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus | | | | | | | |
| | Referred to in I | LPO I | § 22 | l Nr. 3 b) | | | | | | | |
| 10-I-TIV-152-m01 | Theoretical Inf | ormatics | | | | | | - | | | |
| | ECTS 5 | Duratio | n | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Courses | | V (4) | | | | | | | | |
| | Method of ass | essment | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). | | | | | | | | |
| | Referred to in I | LPO I | § 49 § 69 | Nr. 1 a) Nr. 1 a) | | | | | | | |

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|---|---|-------------|
| | | |

| 10-I-TIT-191-m01 | 191-mo1 Tutorial Theoretical Informatics | | | | | | | | | | | |
|-------------------|---|-----------|-----------|---|---|--|---------------------------------|----------------|----------------------------------|--|--|--|
| | ECTS 5 Duration 1 semester Method of grading (not) successfully completed Modul level undergraduate | | | | | | | undergraduate | | | | |
| | Course | S | | Ü (2) | • | - - | | • | | | | |
| | Method | d of ass | essment | a) exe | a) exercises (consisting in completion of approx. 11 home work exercise sheets, presentation of own solutions in the exercise | | | | | | | |
| | | | | groups as well as approx. 5 short assessments written in the exercise group) or | | | | | | | | |
| | | | | Die Pi | tten examination (a riifungsart ist vom P | pprox. 180 to 240 mir rüfling festzulegen | iutes) | | | | | |
| 10-I-RAI -152-m01 | Digital | comput | er systen | ns | | | | | | | | |
| | ECTS | 10 | Duratio | 1 | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Course | s | | V (д) - | + Ü (2) | | | | | | | |
| | Metho | d of ass | essment | writte | n examination (app | rox. 60 to 120 minute | s). | | | | | |
| | | | | lf ann | ounced by the lectu | rer at the beginning c | f the course, the written exami | nation may be | replaced by an oral examination | | | |
| | | | | of one | of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- | | | | | | | |
| | | | | credit | creditable for bonus | | | | | | | |
| 10-I-RAK-152-m01 | Compu | ter Arch | itecture | | | | | | | | | |
| | ECTS | 5 | Duratio | n | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Course | S | | V (2) · | + Ü (2) | - | | • | | | | |
| | Method | d of ass | essment | writte | n examination (app | rox. 60 to 120 minute | s). | | | | | |
| | | | | If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination | | | | | | | | |
| | | | | date). | | | | | | | | |
| | | | | Language of assessment: German and/or English | | | | | | | | |
| | | | | creditable for bonus | | | | | | | | |
| | Referre | d to in L | .PO I | § 22 II Nr. 3 b) | | | | | | | | |
| | Coffinia | vo Toch | | 9 69 1 | Nr. 1 C): Recrimerarc | Intektur | | | | | | |
| 10-1-51-152-1101 | SOILWA | re rech | Duration | | 1 comostor | Mathad of grading | numerical grade | Madullaval | undorgraduato | | | |
| | Courso | <u>10</u> | Duration | $\frac{1}{\sqrt{(1)}}$ | | | numencal grade | Modul level | | | | |
| | Mothor | 5 | ocemont | v(4) | V(4) + U(2) | | | | | | | |
| | Method | 1 01 0550 | essment | written examination (approx. 60 to 120 minutes). | | | | | | | | |
| | | | | ofone | e candidate each (ar | pprox. 20 minutes) or | an oral examination in groups | of 2 candidate | s (approx. 15 minutes per candi- | | | |
| | | | | date) | date). | | | | | | | |
| | Pafarra | d to in l | | 8 / O | | | | | | | | |
| | Referred to in LPO I | | | § 69 1 | Nr. 1 b) | | | | | | | |

| Bachelor's with 1 major Aerospace Computer Science (2020) | JMU Würzburg • generated 19-Apr-2025 • exam. reg. data record 82 f25 - - H 2020 | page 10 / 15 |
|---|---|--------------|

| 10-I-SKS-191-m01 | Control Principles of Modern Communication Systems | | | | | | | | | |
|---------------------------|--|---------------|--|---|--|---|--------------------------|------------------------|--------------|--|
| | ECTS 8 | Duratio | 1 | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | |
| | Courses | _ | V (4) + | · Ü (2) | | | | | | |
| | Method of ass | essment | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus | | | | | | | |
| 10-I-HWP-152-m01 | Practical cours | se in hard | ware | | | | | | | |
| | ECTS 10 | Duratio | n | 1 semester Method of grading (not) successfully completed Modul level undergraduate | | | | | | |
| | Courses | • | P (6) | | | | | - | | |
| | Method of ass | essment | portfol minute | portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project) | | | | | | |
| | Referred to in I | PO I | § 22 | Nr. 3 b) | | | | | | |
| 10-I-SWP-LU- | Practical cours | se in softw | vare for | re for students of Space- and Aerospace Computer Science | | | | | | |
| RI-172-m01 | ECTS 10 | Duratio | n | 1 semester | Method of grading | (not) successfully complete | ed Modul level | undergraduate | | |
| | Courses | , | P (6) | P (6) | | | | | | |
| | Method of ass | essment | practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group) | | | | | | | |
| | Modules succe completed | essfully | 10-I-GdP, 10-I-MEC, 10-I-ST | | | | | | | |
| | other prerequi | sites | In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended. | | | | | | | |
| 10-M-DGLaf-152- | Ordinary Differential Equations for students of other subjects | | | | | | | | | |
| m01 | ECTS 10 | Duration | n | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | |
| | Courses | | V (4) + | · Ü (2) | | | | | | |
| | Method of ass | essment | a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus | | | | | | | |
| 10-M-NUM1af-152- | Numerical Mat | hematics | 1 for st | tudents of other su | bjects | | | | | |
| m01 | ECTS 10 | Duratio | n | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | |
| | Courses | | V (4) + | · Ü (2) | | | | | | |
| Bachalor's with a mains A | Method of ass | essment | a) writ b) oral c) oral Langua credita | ten examination (a l examination of on examination in gro age of assessment able for bonus | pprox. 90 to 180 min le candidate each (15 oups (groups of 2, 10 : German and/or Engl | utes, usually chosen) or to 30 minutes) or to 15 minutes per candidate ish |) | record Salfach Julaces | D300 44 / 45 | |
| Bachelor S with 1 major A | erospace computer Se | Lience (2020) | | | JINO WUIZDURG • generated 19-Ap | n-2025 • exam. reg. data | record 82 125 - - H 2020 | page 11 / 15 | | |

| 10-M-NUM2af-152- | -152- Numerical Mathematics 2 for students of other subjects | | | | | | | | | |
|--|--|------------|----------------|--|--|-------------------|----------------------------------|--|--|--|
| m01 | ECTS 1 | o Du | ation | 1 semester | Method of grading numerical grade | Modul level | undergraduate | | | |
| | Courses | | V (4) | + Ü (2) | | 2 | | | | |
| | Method c | of assessm | ent a) wr | a) written examination (approx. 90 to 180 minutes, usually chosen) or | | | | | | |
| | | | b) ora | al examination of on | ne candidate each (15 to 30 minutes) or | | | | | |
| | | | C) Ora | c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus | | | | | | |
| | | | credi | | | | | | | |
| 10-M=ARTH-161- | Control T | heory | | | | | | | | |
| m01 | ECTS 1 | o Du | ation | 1 semester | Method of grading numerical grade | Modul level | graduate | | | |
| | Courses | • | V (4) | + Ü (2) | · · | | | | | |
| | | | Modu | le taught in: Germa | n and/or English | | | | | |
| | Method o | ofassessm | ent a) wr | a) written examination (approx. 90 to 120 minutes, usually chosen) or | | | | | | |
| | | | b) ora | b) oral examination of one candidate each (approx. 20 minutes) or | | | | | | |
| | | | Lang | Language of assessment: German or English | | | | | | |
| | | | Asse | Assessment offered: In the semester in which the course is offered and in the subsequent semester | | | | | | |
| | | | credi | creditable for bonus | | | | | | |
| 10-I-AKLR-152-mo1 Selected Chapters of Aerospace Science and Engineering | | | | | | | | | | |
| | ECTS 5 Duratio | | ation | 1 semester | Method of grading numerical grade | Modul level | undergraduate | | | |
| | Courses | | V (2) | V (2) + Ü (2) | | | | | | |
| | Method o | ofassessm | ent writte | written examination (approx. 60 to 120 minutes). | | | | | | |
| | | | lf anr | If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination | | | | | | |
| | | | date) | date) | | | | | | |
| | | | Lang | Language of assessment: German and/or English | | | | | | |
| 10-I-AKI-152-m01 | Selected | Chapters | of Compute | mputer Science | | | | | | |
| | ECTS 5 | Du | ation | 1 semester | Method of grading numerical grade | Modul level | undergraduate | | | |
| | Courses | | V (2) | V (2) + Ü (2) | | | | | | |
| | Method o | ofassessm | ent writte | en examination (app | prox. 60 to 120 minutes). | | | | | |
| | | | lf anr | ounced by the lectu | arer at the beginning of the course, the written example | nination may be | replaced by an oral examination | | | |
| | | | or on date) | e candidate each (a | pprox. 20 minutes) or an oral examination in group | is of 2 candidate | s (approx. 15 minutes per candi- | | | |
| | | | Lang | Language of assessment: German and/or English | | | | | | |

| 10-l-3D-152-m01 | 3D Point Cloud Processing | | | | | | | | | |
|---------------------------|--|---------|--|-------------------|-----------------|-------------|---------------|--|--|--|
| | ECTS 5 | Duratio | n 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Courses | | V (2) + Ü (2) | | | | | | | |
| | Method of asso | essment | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus | | | | | | | |
| | Referred to in L | PO I | § 22 Nr. 3 b) | | | | | | | |
| 10-I-BS-191-m01 | Operating Syst | tems | | | | | | | | |
| | ECTS 5 | Duratio | n 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Courses | | V (2) + Ü (2) Module taught in: En | glish | | | | | | |
| | Method of asse | essment | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus | | | | | | | |
| 10-I-DB-152-m01 | Databases | | | | | | | | | |
| | ECTS 5 | Duratio | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Courses | | V(2) + U(2) | | | | | | | |
| | Method of asse | essment | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus | | | | | | | |
| | Referred to in LPO I | | § 49 Nr. 1 b) § 69 Nr. 1 b) | | | | | | | |
| 10-I-LOG-152-m01 | Logic for inforr | natics | | | | | | | | |
| | ECTS 5 | Duratio | n 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Courses | | V (2) + Ü (2) | | | | | | | |
| | Method of asse | essment | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus | | | | | | | |
| | Referred to in L | PO I | § 22 II Nr. 3 b) | | | | | | | |
| Bachelor's with 1 major A | Bachelor's with 1 major Aerospace Computer Science (2020) JMU Würzburg • generated 19-Apr-2025 • exam. reg. data record 82 f25 - - H 2020 page 13 / 15 | | | | | | | | | |

| 11-AP-152-m01 | Astrophysics | | | | | | | | | | | |
|------------------|----------------------|-----------|------------|--|--|-----------------------|-------------------------------|-----------------|-------------------------------|--|--|--|
| | ECTS | 6 | Duratior | า | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Cours | ses | | V (2) + | V (2) + R (2) | | | | | | | |
| | | | | Module taught in: German or English | | | | | | | | |
| | Meth | od of ass | essment | a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or | | | | | | | | |
| | | | | c) ora | c) oral examination in groups (groups of 2, approx. 30 minutes) or | | | | | | | |
| | | | | d) project report (approx. 8 to 10 pages) or | | | | | | | | |
| | | | | lf a wr | e) presentation/talk (approx. 30 minutes) If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the | | | | | | | |
| | | | | form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. | | | | | | | | |
| | | | | | | | | | | | | |
| | Defer | | | Langu | lage of assessment | : German and/or Engl | ISN | | | | | |
| | Referred to in LPO I | | | § 22 § 22 | 3 22 11 Nr. 1 N) 8 22 11 Nr. 2 fl | | | | | | | |
| | | | | § 22 | § 22 II Nr. 3 f) | | | | | | | |
| 11-P-LRB-152-m01 | Labo | ratory Co | urse Phys | ics B for Space and Aerospace Computer Science | | | | | | | | |
| | ECTS 4 Duratio | | Duratior | ۱ | | Method of grading | (not) successfully completed | Modul level | undergraduate | | | |
| | Cours | ses | | P (2) | | | | | | | | |
| | Meth | od of ass | essment | practical assignment with talk (approx. 30 minutes) Prenaring, performing and evaluating (record of readings or lab report) the experiments will be considered successfully com- | | | | | | | | |
| | | | | pleted if a Testat (exam) is passed. Exactly one experiment that was not successfully completed can be repeated once. After | | | | | | | | |
| | | | | completion of all experiments, talk (with discussion; approx. 30 minutes) to test the candidate's understanding of the phy- | | | | | | | | |
| | | | | sics-related contents of the module. Talks that were not successfully completed can be repeated once. Both components of the assessment have to be successfully completed. | | | | | | | | |
| | other prerequisites | | | Students are highly recommended to complete modules 11-P-PA and 11-P-FR1 prior to completing module 11-P-LRB. | | | | | | | | |
| 11-P-LRC-152-m01 | Labo | ratory Co | urse Physi | ics C for Space and Aerospace Computer Science | | | | | | | | |
| | ECTS | 4 | Duratior | า | | Method of grading | (not) successfully completed | Modul level | undergraduate | | | |
| | Cours | ses | | P (2) | | • | | * | <u>.</u> | | | |
| | Method of assessment | | | practical assignment with talk (approx. 30 minutes) | | | | | | | | |
| | | | | Preparing, performing and evaluating (record of readings or lab report) the experiments will be considered successfully com- | | | | | | | | |
| | | | | comp | pleted if a lestat (exam) is passed. Exactly one experiment that was not successfully completed can be repeated once. After completion of all experiments talk (with discussion, approx, approx, approx) to test the candidate's understanding of the physical statements and the physical statement of the phys | | | | | | | |
| | | | | sics-re | elated contents of t | he module. Talks that | were not successfully complet | ed can be repea | ated once. Both components of | | | |
| | | | | the as | sessment have to b | be successfully comp | leted. | | | | | |
| | other prerequisites | | | Students are highly recommended to complete module 11-P-LRB prior to completing module 11-P-LRC. | | | | | | | | |

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| Key Skills Area (20 ECTS credits) | | | | | | | | | | | |
|-------------------------------------|---------------------------------|----------|------------|---------------------|-------------------|---------------------------|-------------|-----------------------|--|--|--|
| General Key Skills (5 ECTS credits) | | | | | | | | | | | |
| All modules offered | | | | liansierable skills | | e nom the area of miorina | | e) may be accredited. | | | |
| Subject-specific Ke | ey Skills | (15 ECT) | S credits) | | | | | | | | |
| 10-I-LRLA-172-m01 | _A-172-mo1 Aerospace Laboratory | | | | | | | | | | |
| | ECTS | 6 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |

| | легозре | | | | | | | | | | | |
|---------------------|---|-----------|---------------|--|--|---|-----------------|---------------|---------------|--|--|--|
| | ECTS | 6 | Duration | ı | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Courses | | V (2) + P (2) | | | | | | | | | |
| | Method | ofasse | essment | Completion of approx. 6 practical exercises (approx. 4 hours each) | | | | | | | | |
| 10-I-LRS1-152-m01 | Seminar for students of Space- and Aerospace Computer Science 1 | | | | | | | | | | | |
| | ECTS | 5 | Duration | 1 | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Courses | 5 | | S (2) | | _ | | | | | | |
| | Method of assessment | | | written elaboration (10 to 15 pages) and presentation (30 to 45 minutes) with subsequent discussion (approx. 20 minutes) on a topic from the field of aerospace information technology | | | | | | | | |
| 10-I-LRS2-152-m01 | Semina | r for sti | udents of | Space | - and Aerospace Cor | mputer Science 2 | | | | | | |
| | ECTS | 5 | Duration | า | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Courses | | | S (2) | | | | | | | | |
| | Method of assessment | | | written elaboration (10 to 15 pages) and presentation (30 to 45 minutes) with subsequent discussion (approx. 20 minutes) on a topic from the field of aerospace information technology | | | | | | | | |
| 10-I-PLR-172-m01 | Practica | al work | Space Te | chnolo | gy | | | | | | | |
| | ECTS 4 Duration | | า | 1 semester | Method of grading | (not) successfully completed | Modul level | undergraduate | | | | |
| | Courses | | | P (2) | | | | | | | | |
| | Method | ofasse | essment | report | : (5 to 10 pages) and | d presentation (approx. 15 minutes) on practical work | | | | | | |
| Thesis (12 ECTS cre | dits) | | | | | | | | | | | |
| 10-I-LRI-BA-152- | Bachelo | or's The | sis Space | and Aerospace Computer Science | | | | | | | | |
| m01 | ECTS | 12 | Duration | า | 1 semester | Method of grading | numerical grade | Modul level | undergraduate | | | |
| | Courses | 5 | | No courses assigned to module | | | | | | | | |
| | Method | ofasse | essment | Bache Langu | lor's thesis (approx age of assessment: | . 30 to 60 pages) German or English | | | | | | |
| | Additional Information | | | Time to complete: 12 weeks | | | | | | | | |