DANIA ACADEMY

Curriculum for Automotive Techonology

Erhvervsakademi Dania Viborg

Valid from 01.09.2019

Curriculum for
Academy Profession Degree Automotive Technology (AP) at Dania Academy of Higher Education

Approved by the Rector on behalf of the Board.

Anders Graae Rasmussen

01.09.2019

Change log:

Ver-sion	Date	Performed by	Description
2018	15.8.2018	Mette Petersen	New curriculum in accordance with new law (80B)
2019	8.7.2019	Mette Petersen	Correction of description of 1st external exam

Table of content

Introduction

The curriculum Academy Profession Degree Automotive Technology (AP) consist of two parts (rulebooks):

1. Part 1 - The national
2. Part 2 - The institutional

The national part of the curriculum for Academy Profession Degree Automotive Technology (AP) is issued according to § 18, section 1 in *Bekendtgørelse om tekniske og merkantile erhvervsakademiuddannelser og professionsbacheloruddannelser* (the executive order on technical and mercantile Academy Profession programmes and professional bachelor educations).

The national part of the curriculum is compiled by the education network for Academy Profession Degree Automotive Technology (AP) and is approved by the board of all the providers - or by the principal by order of the board - and after a hearing of the institutions' education committees and the education's chairmanship of the external examiners.

The national part secures that the academic contents of the national part of the education is identical in all institutions.

The institutional part is provided by the education at Dania Academy and is organized taking local and regional interests into account.

The institutional part of the curriculum is approved by Dania Academy according to the rules concerning the education, including *Bekendtgørelse om tekniske og merkantile erhvervsakademiuddannelser og professionsbacheloruddannelser* (the executive order on technical and mercantile Academy Profession programmes and professional bachelor educations).

If a discrepancy should occur between this curriculum and the rules concerning the education in other respects, the other rules concerning the education takes precedence.

Part 1 - The national

1. The programme's goals for learning outcomes

Knowledge
The student will gain knowledge about:

- the practice and centrally applied theory and methods associated with automotive technology and the profession of automotive technology
- and an understanding of theory and method in automotive technology in connection with the profession of automotive technology.

Skills
The student will get the skills to:

- apply key methods and tools within automotive technology and be able to apply the skills related to the profession of automotive technology
- assess the real-life problems as well as outline and choose solutions within automotive technology and the profession of automotive technology
- disseminate real-life issues and possible solutions within automotive technology and the profession of automotive technology to business partners and users.

Competencies
The student will learn to:

- manage development-orientated situations within automotive technology and the profession of automotive technology
- participate in academic and interdisciplinary collaboration in relation to automotive technology and the profession of automotive technology in a professional manner
- in a structured context, acquire new knowledge, skills and competencies in relation to automotive technology and the profession of automotive technology

2. The programme includes 6 national subject elements

The following are the national subject elements shown in relation to the subject areas described in the educational appendix. This is followed by the content and the learning objectives for the six national subject elements.

Table 1: Subject elements

Subject Areas	National subject elements				
Technology and auto technical analysis (25 ECTS)	15 ECTS Technology			10 ECTS Auto technical analysis	**25 ECTS**
The company's operation and development (35 ECTS)	5 ECTS Quality, safety and the environment	12 ECTS Organisation, management and business economics	10 ECTS Marketing and sales, service and communication	8 ECTS Method, analysis and use of data	**35 ECTS**
ECTS in total	60 ECTS				

2.1. Technology (15 ECTS)

Content
The national subject element contains knowledge, skills and competencies including traditional and the newest technology for a vehicles mechanical and electronic systems. The subject area also includes security systems (active and passive), materials science and diagnostics as well as optimisation of auto technical systems. Generally, work is done with a system understanding of the technologies and their correlation, optimisation, testing as well as documentation of potential solutions, including IT-based solutions.

Learning objectives for Technology
Knowledge
The student will gain knowledge about:

- the industries and the subjects practice as well as centrally applied theories and methodology within the vehicles mechanical and electronic systems, including the vehicles latest technologies, including hybrid, electric and battery technologies, traditional petrol and diesel technologies, basic knowledge about motors, drive lines, undercarriages, security systems, as well as emissions and the environment
- and an understanding of the industry's application of theory and method, the vehicles mechanical and electronic systems, including traditional petrol, diesel and the latest hybrid, electric and battery technologies, and basic knowledge of motors, drive lines and undercarriages as well as emissions and the environment
- and an understanding of the industry's application of theory and methodology in relation to the latest hybrid, electric and battery technologies.

Skills
The student will get the skills to:

- apply the subject's key methods and tools, as well as be able to apply the skills related to employment in the industry within the vehicle's technologies including European norms and other relevant standards
- to document and evaluate the real-life issues as well as outline and choose solutions, including assessing the difference between emissions and environmental impact within the different technologies
- communicate the real-life issues and possible solutions to business partners and users.

Competencies
The student will learn to:

- manage development-orientated situations within automotive technology
- participate in professional academic and interdisciplinary collaboration in relation to finding a solution for technological issues in a professional manner
- in a structured context, acquire new knowledge, new skills, and competencies in relation to the profession within the field of vehicles' latest technological developments.

ECTS weight
The national subject element Technology is weighted 15 ECTS credits.

2.2. Auto technical analysis (10 ECTS)

Content
The national subject element deals with auto technical analysis and diagnosis techniques, as well as the use of technical data and data capture from the vehicle control systems. In addition, this national subject element

contains data communication relating to online-diagnosis and repair and focuses on the use and selection of diverse IT-based solutions, including general coding as well as an understanding of how this could be used and included in the solutions. The subject area works generally with diagnosis, technical communication, collection and the use of knowledge in relation to both new and experience-based diagnosis and analysis. The subject area also includes work with relevant technical calculations within the subject area for the understanding of the data which is obtained from the various analyses

Learning objectives for auto technical analysis
Knowledge
The student will gain knowledge about:

- the industry and the subject area's practice and centrally applied theory and methodology within central auto technical analysis as well as diagnostic techniques and tools, including technical mathematics
- and an understanding of the industry's use of theory and method in the field of auto technical analysis, including the relationships between types of errors and possible causes, also including IT-based solutions.

Skills
The student will get the skills to:

- apply the subject area's central methods and tools and can apply the skills related to employment within the profession in relation to various auto technological analyses and diagnostic tools and central IT-based solutions for among things, documentation
- evaluate the real-life issues as well as outline and choose solutions in relation to the auto technical analysis and diagnosis techniques to advise customers
- communicate the real-life issues and possible solutions in relation to auto technical analysis to business partners and users.

Competencies
The student will learn to:

- manage development-based situations in relation to auto technical analyses, including needs identification, diagnostics, data management as well as test technologies in relation to the needs and demands
- participate in academic and interdisciplinary collaboration in relation to auto technical analysis in a professional manner
- in a structured context, acquire new knowledge, skills and competencies in relation to the profession in connection with auto technical analyses.

ECTS weight
National subject element Auto technical analysis is weighted 10 ECTS credits.

2.3. Method, analysis and use of data (8 ECTS)

Content
The national subject element contains an introduction to the basic elements of data analysis and method, including how data analysis can be used to achieve greater knowledge in both the technical and the commercial areas. The subject provides the methodological basis for the preparation of reports and tasks on the programme. The national subject element provides basic statistical concepts, statistical description of data and simple statistical calculations, IT tools, such as spreadsheets, and technical methods that can support data collection, processing and analysis. The subject element also contains basic concepts in the field of Big Data. The subject element will also contain the basic legal and ethical aspects for the handling of data, including personal data.

Learning objectives for method, analysis and use of data
Knowledge
The student will gain knowledge about:

- the industry and the subject's practice and centrally applied theory and method within the learning of methods and data analysis, including sources, procedures, data collection, as well as legal and ethical aspects
- and an understanding of the industry's use of theory and method, including central digital data sources and standard procedures in the auto industry
- and an understanding of qualitative and quantitative methods, including knowledge of the use, collection and processing of information for use in the development of digital business models for example.

Skills
The student will get the skills to:

- apply the subject's central methodologies and tools as well as apply the skills connected to employment within the profession in relation to method and data analysis, including the collection and processing of data and information
- evaluate the real-life issues as well as outline and choose solutions in relation to method and data analysis, including evaluating relevant KPIs for the clearing and categorisation of collected data, and produce a structured report with analysis and recommendations as well as compliance with formalities
- disseminate real-life issues and possible solutions, for example, simple analyses and results of collected data for partners and users

Competencies
The student will learn to:

- deal with development-orientated situations in relation to method and data analysis, including planning and implementing a data analysis to ensure a valid data basis
- participate in academic and interdisciplinary collaboration in relation to method and data analysis in a professional manner
- in a structured context, acquire new knowledge, skills and competencies in relation to method and data analysis.

ECTS weight
The national subject element Method, analysis and use of data is weighted 8 ECTS credits.

2.4. Marketing and sales, service and communication (10 ECTS)

Content
The national subject element deals with marketing and sales, service and communication. The subject element includes communication, sales and negotiation techniques as well as advisory and consultative functions in relation to the auto industry, as well as work with written communication. The subject element contains sales theory and theory of personal communication and dissemination as well as negotiation in relation to sales and purchasing. The subject also contains conditions within service design/management, including the existing legal framework, as well as how different business models can be applied in relation to the market and competitive situation.

Learning objectives for marketing and sales, service and communication
Knowledge
The student will gain knowledge about:

- and an understanding of industry practices and centrally applied theory and method in marketing and sales, service, consultancy and communication, including business models
- and an understanding of the industry's use of theory and method in marketing and sales, service, consultancy and communication, including relevant legal matters.

Skills
The student will get the skills to:

- use the key methods and tools within marketing and sales, service, consultancy and communication and can apply the skills related to employment within the profession in relation to the subject areas
- evaluate the real-life issues as well as outline and choose solutions in relation to sales, service, consultancy and communication.
- disseminate real-life issues, including technical specifications and documentation, as well as specify solutions in relation to marketing and sales, service, consultancy and communication to partners and customers.

Competencies
The student will learn to:

- with a customer-centric focus, manage marketing, sales and service tasks adapted to the company
- manage development-orientated situations in relation to marketing and sales, service, consultancy and communication
- participate in academic and interdisciplinary collaboration within the subject in a professional manner
- in a structured context, acquire new knowledge, new skills, and competencies in relation to the profession within the field of marketing and sales, service and communication.

ECTS weight
The national subject element Marketing and sales, service and communication is weighted 10 ECTS.

2.5. Organisation, management and business economics (12 ECTS)

Content
The national subject element deals with organisational understanding, management and financial considerations connected to the operation and development of a company in the field of automotive technology. The subject element deals with various organisational structures and forms, cultures and strategies as well as with management, and an understanding of management tasks, management roles and the importance of management. The concepts of motivation, satisfaction, well-being, employee participation and involvement, including the individuals' behaviour in organisations, will be included in the subject. The subject element contains the principles governing the organisation of project work as well as work associated with organisational change, adaptation and management during changes. Business Economics, including economic governance, investment, financial analysis and ratios and their use, is also included in this subject.

Learning objectives for organisation, management and business economics
Knowledge
The student will gain knowledge about:

- the profession's practice and centrally applied theory and methods associated with organisation, management and business economics.
- and an understanding of the industry's application of theory and method in the field of organisation, management and business economics, including relevant legal aspects associated with it.

Skills
The student will get the skills to:

- apply the profession's key methods and tools within organisation, management and business economics and be able to apply the skills related to employment within the profession
- assess the real-life problems as well as outline and choose solutions within organisation, management and business economics
- disseminate real-life issues and possible solutions within organisation, management and business economics to business partners and users.

Competencies
The student will learn to:

- manage development-orientated situations in the field of organisation, management and business economics
- participate in academic and interdisciplinary collaboration in relation to organisation, management and business economics in a professional manner
- in a structured context, acquire new knowledge, new skills, and competencies in relation to the profession within the field of organisation, management and business economics.

ECTS weight
The subject element Organisation, management and business economics is weighted 12 ECTS.

2.6. Quality, safety and the environment (5 ECTS)

Content
The subject element contains quality, environmental and safety management, certificates and the corresponding workflows, as well as documentation. The subject element also contains quality systems and process and documentation requirements, as well as quality, environmental and safety standards in the auto industry. In addition, the subject element contains standards, for example in relation to the repairs and claims statements.

Learning objectives for quality, safety and the environment
Knowledge
The student will gain knowledge about:

- the industry and the subject's practice and centrally applied theory and methods within quality, safety and the environment, including work environment and legal environmental requirements
- the practice, centrally applied theory and methods, and will also understand the industry's use of theory and method in quality, safety and the environment, including claim statements.

Skills
The student will get the skills to:

- apply key methods and tools in the field of quality, safety and the environment, and can apply the skills related to employment within the profession in relation to the quality, safety and the environment, including being able to follow specified procedures to ensure compliance with the quality, safety or environmental requirements
- evaluate the real-life issues, including the complexity of a task in relation to the quality system's requirements and damage repairs in concrete systems and contexts, as well as outline and select solutions
- communicate the real-life issues and possible solutions in relation to quality, safety and the environment to business partners and users.

Competencies
The student will learn to:

- manage development-orientated situations in relation to quality, safety and the environment
- participate in academic and interdisciplinary collaboration in relation to quality, safety and the environment, including the development of procedures in a professional manner
- in a structured context, acquire new knowledge, skills and competencies within the understanding of new quality systems and requirements, as well as environmental and safety requirements in relation to the profession.

ECTS weight
The subject element Quality, environment and safety is weighted 5 ECTS credits.

2.7. The number of exams in the national subject elements

National subject elements for the 1st year of study constitute 60 ECTS. The 1st year exam consists of two examination, which gives a total of 60 ECTS.

In addition, there is an exam in the final exam project with an external co-examiner. For an exam in connection with internship, please refer to section 3.

For a comprehensive overview of all the programme's exams, please refer to the institutional part of the curriculum, as the national subject elements described in this curriculum can be examined together with the subject elements specified in the institutional part of the curriculum.

Table 2: Time placement of the exams

Placement	Exam	National subject elements	Local subject elements	ECTS	Internal/External	Grade	Grade weight
1st semester	1st internal exam *	Technology and Auto technical analysis and autoteknisk analyse and The company's operation and development		15	INTERNAL	7-grade scale	0,25
2nd semester	1st external exam *			45	EXTERNAL	7-grade scale	0,75
3rd semester	2nd internal exam		Elective Automotive Management OR Automotive Engineering	30	INTERNAL	7-grade scale	1
4th semester	3rd internal exam	Internathip exam		15	INTERNAL	7-grade scale	1
	2nd external exam	Final project exam		15	EXTERNAL	7-grade scale	1
ETCS in total				**120**			

* 1st year test consists of two parts which must be passed, 1st internal and 1st external exam.

3. Internship

The internship is organised in a way that, combined with the remaining parts of the course programme, will contribute to the student developing practical competencies in relation to the auto industry. The internship aims to enable the student to be able to use the programme's methods, theories and tools in solving concrete and practically-orientated tasks within automotive technology/technical analysis in the company's operations and development, including organisation, management and business economics – preferably in combination.

Learning objectives for programme's internship
Knowledge
The student will gain knowledge about:

- the internship company and practices within the company as well as in the relevant industry, and centrally applied theory and methods
- and understand the practical and applied theory and method as well as be able to understand the internship's practice and use of theory and method.

Skills
The student will get the skills to:

- use the central technological and analytical methods and tools, which are used in the internship company and can apply the skills that relate to employment in the profession as an automotive technologist
- organise and plan work assignments in the profession
- evaluate the real-life issues related to the company and compare and select solution options in the role as an automotive technologist
- communicate the real-life issues and possible solutions in relation to the internship to business partners and customers.

Competencies
The student will learn to:

- manage development-orientated situations in relation to the auto industry, and especially in relation to the internship company
- participate in academic and interdisciplinary collaboration in relation to internship in a professional manner
- in a structured context, acquire new knowledge, skills and competencies in relation to the auto industry and their internship

ECTS weight
The internship is weighted 15 ECTS credits.

Number of exams
The internship is completed with 1 exam.

4. Requirements for the final exam project

The learning objectives for the main exam project are identical to the programme's learning objectives listed above under point 1.
The main exam project must demonstrate the student's understanding of practices and centrally applied theory and methods in relation to a real-life problem, which is based upon a specific task within the programme's area. The problem statement that must be central to the programme and profession, is formulated by the student, possibly in collaboration with a private or public company. The institution approves the problem statement.

The final exam project can be written individually or in group of 2-3 students.
The final exam project must have a maximum length of:

- With 1 student: between 65.000-75.000 keystrokes
- With 2 students: between 75.000-115.000 keystrokes

- With 3 students: between 115.000-150.000 keystrokes

Keystrokes includes spaces, foot notes, figures and tables. Keystrokes does *not* include front page, table of content, bibliograhy and appendix.

Exams for the final exam project
The final exam project completes the programme in the last semester once all the preceding exams have been passed.

ECTS weight
The final exam project is weighted 15 ECTS credits.

Examination form
The exam is an oral and written examination with an external co-examiner, a combined mark is given based on the 7-point scale for the written project and the oral presentation.

5. Rules on credit

Passed programme elements are equivalent to similar programme elements taken at other educational institutions offering this programme.

The students are obliged to inform us of any completed educational elements from another Danish or foreign higher education programme or any jobs which are likely to provide credit.

The Academy approves, in each instance, credit on the basis of completed programme elements and any jobs which meet the objectives of the subjects, the educational part and the internship parts.

The decision is taken according to an academic assessment.

For prior credit approval of studies in Denmark or abroad, students are required to document each approved and completed programme element on the completion of these studies.

In connection with applying for prior credit approval, the students give permission that the Academy can obtain the necessary information after the student's completion.

On approval according to the above, the programme element is deemed to be passed if it was passed according to the rules of the programme in question.

6. Commencement

This part of the national curriculum is valid from 01.09.2018 and is valid for students who are enrolled after 01.08.2018

Part 2 – The institutional part

7. The education contains 1 local subject elements, including elective

In addition to the national subject elements the education includes local subject element as well amounting to 30 ECTS points. The local subject elements give the student the opportunity to qualify the study and occupational competence through optional subjects, customization and perspectivation of subjects relating broadly to the education's area of employment.

Each year the education offers a number of local subject elements as optional subjects as described in the annex to this curriculum. The institution is not obliged to complete all the optional subject courses offered, but a suitable number of courses are completed according to a professional and capacity-related estimation.

7.1. Elective - Automotive Management 30 ECTS

Content
The purpose of this course is for the student to have a deeper understanding of managing business in the automotive industry. The student will get insight in Strategies and how to choose which strategy will be the best answer in given situations. During the course there will be established a close cooperation with local companies, where the students are going to work with a problem for the company simultaneously. The students will learn Danish Language for automotive industry.

The subject must also develop the individual's work identity and create an understanding of the diversity of services and the opportunities offered by the sector.

Learning objectives for Automotive Management
Knowledge:
The student will gain knowledge and understanding about:

- Company strategies
- Business models including Shared Economy
- Trade theories and the incentives to trade
- Current regulations and taxes connected to import and export.
- Purchase-, sales-, and marketing strategies and methods
- The strategic foundation and work in a company.
- Quality control systems and inventory management
- The causes of unemployment and the consequences of these
- The causes of inflation and the consequences of these
- Exchange-rate formation and exchange rate systems as well as their relevance in international trade
- The most important international organizations
- Trade agreements and trade blocs and their impact on import/export
- How accounting can support managerial decisions and the company's strategy
- The marketing process and the concept of value creation
- The buyer behavior both in B2C and B2B markets
- Products and services
- Forms of direct- and online-marketing
- Job and Career, including Job Identity, Job Match, Career Identity, Business & Interpersonal Communication

Skills
The student will obtain the necessary skills to:

- Apply methods and strategies in relation to imports and exports.
- Identify potential markets for imports and exports, and apply relevant methods for processing them.
- Apply social media in marketing and advertising
- Assess and compare investment scenarios on the basis of a calculation of the net present value, internal rate of return and sensitivity.
- Describe and analyse the main national economic indicators for the purpose of export market assessment - Create a master budget - Analyse the copmany's micro- and macro-environment
- Segment a market and find the appropriate target group where the company can differentiate itself
- Develop a communication strategy
- Understand and be aware of your own work identity; Develop your personal work identity so that it reflects in profile and image; Enter and engage in different communicative situations in a relevant work practice

Competencies
The students can:

- Contribute to development of strategies and action plans for imports and exports in the automotive industry
- Communicate strategies and action plans
- Prepare a master budget, and value simple investment scenarios
- With a professional approach, be able to handle planning functions in relation to international trade and marketing practices
- Handle and assess marketing issues and are able to implement solutions
- Participate in the strategic work as developer, interpreter and mediator of goals and strategies at their own level
- Participate in development-oriented and/or interdisciplinary work processes in the management area
- Take care of defined management and planning functions in relation to own practice
- Participate in product/service pricing
- Understand and be aware of your own work identity; Must be able to set and target your job identity in relation to industry and businesses so that the good job match can be achieved; Must be able to communicate their work identity, relate it to and integrate it into relevant work networks

ECTS weight
Local subject element Automotive Management is worth 30 ECTS credits.

7.2. Elective – Automotive Engineering 30 ECTS

Content
Electric Hybrid Conversion, Purpose:
That the graduate has the skills to carry out a quality assessment of the battery pack and drive line in a safe manner. The graduate has knowledge of parallel hybrid (P-HEV,Series-parallel (SP-HEV), power split hybrid (PS-HEV) and power split hybrid with two or more power lines (PS-X-HEV) structure and mode of operation. And can assess the pros and cons of the environment compared to traditional vehicles.

Design thesis, Purpose:
Acquire knowledge of various auto-technical designs / constructions for damage repair and injury assessment. That the graduate has the skills to participate in a design development process and contribute to development of sustainable productions and production with the aim of covering the businesses need.

Emissions, Purpose:
That the graduate has competences within the emission purification process and can perform measurements on different vehicles as well as document the vehicle's pollution level according to applicable EU legislation. And convey to users' what purification processes are best for their driving pattern. That the graduate has in-depth knowledge of the chemical process of smoke reduction combustion engines.

Formulas and calculations, Purpose:
Includes development-based knowledge in the dimensioning of electrical engineering and automotive engineering constructs as well as documenting the calculations according to relevant standards. That the graduate has the skills to document and convey to the companies in one Interdisciplinary cooperation/environment for production.

Project management, Purpose:
Acquire knowledge of various project management tools, models and methods for project planning and management, as well as the definition of project content and course.

Job and Career
The subject must also develop the individual's work identity and create an understanding of the diversity of services and the opportunities offered by the sector.

Learning objectives for Automotive Management
Knowledge
The student has:

- Understanding of practice and centrally used theory and method of parallel hybrid (P-HEV), Series-parallel (SP-HEV), power split hybrid (PS-HEV) and power split hybrid with two or more drive lines (PS- X-HEV)
- Understanding of practice and central applied theory and method for the emission purification process on vehicles
- Understanding of Practice and Centrally Used Theory and Method of Automotive Design/Construction and Construction on Vehicles
- Understanding of practice and centrally applied theory and method of electrical engineering calculations and mechanical constructions on vehicles
- Understanding of practice and central applied theory and method of project management including situational analysis and planning
- Job and Career, including Job Identity, Job Match, Career Identity, Business & Interpersonal Communication

Skills
The student will obtain the necessary skills in:

- Assessing practical issues regarding vehicle repair and setting up and opting for solutions in a safe manner
- Evaluate practical issues regarding vehicle repair as well as set up and opt for solutions within smoke reduction processes
- Evaluate practical issues regarding the design of replacement parts/retrofitting parts of vehicles as well as choice of options
- Evaluate practical issues regarding injury repairs and vehicle damage assessment and perform damage repairs according to proper auto-technical design
- Evaluate practical issues regarding design tasks and build an auto related project using relevant project management tools

- Understand and be aware of your own work identity; Develop your personal work identity so that it reflects in profile and image; Enter and engage in different communicative situations in a relevant work practice

Competencies
The students can:

- In a structured context, acquire new knowledge, skills and competencies relating to customer and employee counselling regarding safety and quality assessment of electric hybrid vehicles
- In a structured context, acquire new knowledge, skills and competencies in the counselling of customers and employees regarding safety and SRS systems and other forms of smoke reduction processes in accordance with EU legislation
- In a structured context, acquire new knowledge, skills and competencies associated with consulting companies and employees regarding the dimensioning of auto-technical components
- In a structured context, acquire new knowledge, skills and competencies in the design of body structures and interchangeable parts and other auto-technical products in cooperation with local companies
- In a structured context, acquire new knowledge, skills and competencies in project management and use of the various management tools as well as being able to define a project from start to finish
- Understand and be aware of your own work identity; Must be able to set and target your job identity in relation to industry and businesses so that the good job match can be achieved; Must be able to communicate their work identity, relate it to and integrate it into relevant work networks

ECTS weight
Local subject element Automotive Engineering is worth 30 ECTS credits.

7.3. Examinations

When a student starts a subject element, semester etc. the student is at the same time signed up for the ordinary examination. The educational institution establishes, for each examination, a deadline for when a cancellation of the examination can take place. The education institution can in the curriculum establish that compulsory attendance and handing in assignments and projects etc. are a precondition for participation in an examination. The institution may establish that a cancellation cannot take place neither for entire educations or part of educations in this curriculum.

The purpose of exams during the education is to decide to which degree the student meets the professional objectives established for the education and its elements. An education must include the external examinations required according to the relevant executive order on examination regulations. The education can in addition include internal examinations. The education must as a minimum include the 3 following examinations:

1. **An internal or external examination** placed **before the end of the 2nd semester** which must be able to document that the student has acquired the learning objectives concerning the 1st year of study..
2. **An internal or external examination** which is placed after the student's completion of the education's amount of **internship units** and which must be able to document that the student has acquired the learning objectives concerning the internship.
3. **An external examination** in the final exam project which along with the post internship examination and the education's other examinations must be able to document that the learning objectives for the education have been acquired. The examination consists of a project and an oral part where a joined mark is given. The examination can first take its place after the final examination during the internship and the education's other examinations are passed.

NB: The national and the local subject elements may be tested during the same examination.

For more information, see Bekendtgørelse om prøver i erhvervsrettede videregående uddannelser (The executive order on examination regulations), Bekendtgørelse om karakterskala og anden bedømmelse ved uddannelser på Uddannelses-og Forskningsministeriets område (The executive order on marking regulations), as well as **Dania Academy's Rules of Examinations.**

7.3.1 Examinations on the diploma

The following examinations will appear on the diploma for the education.

Table 2: Time placement of the exams

Placement	Exam	National subject elements	Local subject elements	ECTS	Internal/External	Grade	Grade weight
1st semester	1st internal exam *	Technology and Auto technical analysis and autoteknisk analyse and The company's operation and development		15	INTERNAL	7-grade scale	0,25
2nd semester	1st external exam *			45	EXTERNAL	7-grade scale	0,75
3rd semester	2nd internal exam		Elective Automotive Management OR Automotive Engineering	30	INTERNAL	7-grade scale	1
4th semester	3rd internal exam	Internathip exam		15	INTERNAL	7-grade scale	1
	2nd external exam	Final project exam		15	EXTERNAL	7-grade scale	1
ETCS in total				**120**			

* 1st year test consists of two parts which must be passed, 1st internal and 1st external exam.

7.3.2 Description of the examinations

1st internal exam – Project A

Prerequisite requirements	All mandatory assignments from the 1st semester must be approved in order to go to the exam.
Form	Written group project with oral group defense (2-4 students) *Internal exam*
Placement	Learning objectives from the national part of the curriculum focusing on *traditional technology*, *methodology* and *communication*.
ECTS points in total	15 ECTS
Contents	The purpose of the project is to test the student's ability to work **methodically and theoretically** with a given topic. The project should be based on a **business-related and current relevant issue** and should therefore be **prepared either in collaboration with a company or organization**.
Description of the examination	Project A is a group-based **interdisciplinary** written project with an oral defense within a **defined theme or subject** related to the field of study.
Duration	2 students: 30 minutes 3 students: 40 minutes 4 students: 50 minutes

Contents related extent (formalia)	The project has an extent of **20 pages per group +/- 10 %** (1 page = 2.400 keystrokes incl. spaces).
Evaluation	7-grade scale. Grade will be written on diploma. If the exam is not passed, the guidance teacher will advise on which areas to improve and a new project must be handed in.
Evaluation criteria	• Connection between problem formulation, project content and conclusion • Methodology • Usage of learned theory • Consistency and connection • Conclusion • Formalities, language and layout
Writing and spelling skills	Writing and spelling skills will influence the overall assessment of the project.
Language	English
Aids	All aids are allowed.
Precondition for participation in the examination	All mandatory assignments from the 1st semester must be approved in order to go to the exam.
Deadline for cancellation	See Dania's Exam Regulation

1st external exam – Project B

Prerequisite requirements	Project A must be passed as well as compulsory assignments in the 2nd semester must be approved in order to pass the project B exam.
Form	Written individual or group assignment (2-3 students) with individual defense. *External exam*
Placement	Learning objectives from the national part of the curriculum focusing on *new technologies*, *organization*, *data use*, *marketing / sales / service*, *documentation* and *quality*.
ECTS points in total	45 ECTS
Contents	The purpose of the project is to test the student's ability to work **methodically and theoretically** with a given topic. The project should be based on a **business-related and current relevant issue** and should therefore be **prepared either in collaboration with a company or organization**.
Description of the examination	Project B is an individual or group-based **interdisciplinary** written project with an oral defense within a **self-chosen theme or subject** related to the field of study.
Duration	30 minutes individual exam
Contents related extent (formalia)	The project has an extent of **20 pages +/- 10 %** (1 page = 2.400 keystrokes incl. spaces).
Evaluation	7-grade scale. Grade will be written on diploma. If the exam is not passed, the guidance teacher will advise on which areas to improve and a new project must be handed in.

Evaluation criteria	• Connection between problem formulation, project content and conclusion • Methodology • Usage of learned theory • Consistency and connection • Conclusion • Formalities, language and layout
Writing and spelling skills	Writing and spelling skills will influence the overall assessment of the project.
Language	English
Aids	All aids are allowed.
Precondition for participation in the examination	Project A must be passed as well as compulsory assignments in the 2nd semester must be approved in order to pass the project B exam.
Deadline for cancellation	See Dania's Exam Regulation

2nd internal exam – Elective: Automotive Management

Prerequisite requirements	Project A and project B must be passed as well as compulsory assignments in order to go to the exam in the chosen elective.
Form	Oral individual exam on the basis of the drawn exam question.
Placement	• Before the end of the 3rd semester. • Local subject area
ECTS points in total	30 ECTS
Contents	Exam in the learning objectives in the elective: Automotive Management.
Description of the examination	Test in the elective that must document that the student has achieved all the learning objectives defined for the elective "Automotive Management". The student draws an exam question which is presented after a preparation time.
Duration	90 min. preparation, 45 min. examination.
Contents related extent (formalia)	The exam is only consist of an oral part.
Evaluation	7-grade scale. Grade will be written on diploma. If the exam is not passed, the guidance teacher will advise on which areas to improve and a new exam must be taken.
Evaluation criteria	• Usage of learned theory • Consistency and connection
Writing and spelling skills	The exam does only consist of an oral part.
Language	English
Aids	All aids are allowed.
Precondition for participation in the examination	Project A and project B must be passed as well as compulsory assignments in order to go to the exam in the chosen elective.
Deadline for cancellation	See Dania's Exam Regulation

2nd internal exam – Elective: Automotive Engineering

Prerequisite requirements	Project A and project B must be passed as well as compulsory assignments in order to go to the exam in the chosen elective.
Form	Oral individual exam on the basis of a written portfolio.
Placement	• Before the end of the 3rd semester. • Local subject area
ECTS points in total	30 ECTS
Contents	Exam in the learning objectives in the elective: Automotive Engineering.
Description of the examination	Test in the elective that must document that the student has achieved all the learning objectives defined for the elective "Automotive Engineering".
Duration	45 min. oral exam
Contents related extent (formalia)	The written portfolio must have a max. of 30 pages.
Evaluation	7-grade scale. Grade will be written on diploma. If the exam is not passed, the guidance teacher will advise on which areas to improve and a new project must be handed in.
Evaluation criteria	• Usage of learned theory • Consistency and connection
Writing and spelling skills	Writing and spelling skills will influence the overall assessment of the project.
Language	English
Aids	All aids are allowed.
Precondition for participation in the examination	Project A and project B must be passed as well as compulsory assignments in order to go to the exam in the chosen elective.
Deadline for cancellation	See Dania's Exam Regulation

3rd internal exam - Internship examination

The table below concerns the concerned local provision's formal local guidelines on the completion of the internship.

Prerequisite requirements	Exams on the 1st, 2nd and 3rd semester must be passed in order to pass the exam in internship.
Form	The test of the internship will be on the basis of a written report followed by an oral presentation of the student's experiences.
Placement	• By the end of 4th semester • Learning objectives in the national subjects
ECTS points in total	15 ECTS
Contents	Exam in the learning objectives from the internship.

Description of the examination	The report must be practical and contain a concentrated description of the subject (s) and issues discussed during the internship and how the student practically worked with them in their internship.
Duration	15 minutes presentation for examiner and 2nd semester students.
Contents related extent (formalia)	The exam consists of four parts: • Internship report must be between 11.000-12.000 keystrokes. • A letter of thanks to the company, which is sent by mail with the examiner in copy. • Completed electronic evaluation schedules from both the student and the company. If the company has not completed the evaluation schedule, it is the student's responsibility to remind the company about it in an email with the examiner in copy. • An oral presentation
Evaluation	7-grade scale. The grade will be on the final diploma.
Evaluation criteria	If the internship report is not passed, the guidance teacher will advise on which areas to improve. If the assessment is due to the lack of reflection in relation to learning objectives and individual goals, then the student has 1 week to improve the material after which the report is returned. If the assessment is due to a lack of participation in the internship, a new internship course will be established.
Writing and spelling skills	Writing and spelling skills will influence the overall assessment of the project.
Language	English
Aids	All aids are allowed.
Precondition for participation in the examination	Exams on the 1st, 2nd and 3rd semester must be passed in order to pass the exam in internship.
Deadline for cancellation	See Dania's Exam Regulation

2nd external exam - Exam for the final exam project

The table below concerns the formal requirements in paragraph 4.

Prerequisite requirements	In order to be admitted to the final project examination, the student must have passed all the examinations/ exams on the 3 previous semesters of the programme and the internship on the 4th semester.
Form	On the basis of a written project prepared in groups or individually, the student will be examined in an individual oral examination based on the completed project.
Placement	• By the end of 4th semester • Learning objectives in the national subjects
ECTS points in total	15 ECTS
Contents	Exam in the learning objectives for the final exam project.
Description of the examination	The exam in the final exam project must prove that the learning objectives for the education have been achieved. The project will be based on key issues in the education. The problem of the project is prepared by the student and, as far as possible, in cooperation with a company. The problem statement must be approved by the school.
Duration	45 min. individual oral exam

Contents related extent (formalia)	The final exam project must have a lenght of: • With 1 student: Between 65.000-75.000 keystrokes • With 2 students: Between 75.000-115.000 keystrokes • With 3 students: Between 115.000-150.000 keystrokes Keystrokes include spaces, foot notes, tables and graphs, illustrations, but it does not include front page, table of content, bibliography and appendix.
Evaluation	7-grade scale. Grade will be written on diploma. One overall grade is given after the 7-grade scale for the project based on an overall assessment of the written work and the oral performance. In the case of grade-giving, the written and the oral part weighs equally. No delectors are disclosed.
Evaluation criteria	If the project is given a grade below 02, then the student must write a new project based on a new problem statement.
Writing and spelling skills	Formalities, writing and spelling skills will influence the overall assessment of the project.
Language	English
Aids	All aids are allowed.
Precondition for participation in the examination	In order to be admitted to the final project examination, the student must have passed all the examinations/ exams on the 3 previous semesters of the programme and the internship on the 4th semester.
Deadline for cancellation	See Dania's Exam Regulation

7.4.3 Make-up examination, dispensation, cheating, complaints and special examination conditions

Dania Academy has established rules and procedures regarding special conditions concerning the completion of examinations. The rules and procedures will appear from **Dania's examination regulations which the student is expected to have read at the beginning of the 1st semester.**

The exam regulations include, among other things, rules and procedures in the following areas:

- When a student may attend a make-up examination
- When the student must pass the examination
- How the student should relate to physical or psychological disability
- Examinations taken abroad
- Complaints
- Cheating, plagiarism and disruptive behaviour during examinations etc.

7.4. Compulsory attendance

At Dania we continuously monitor our students´ level of study activity. We see each student as an independent person with independent learning ability and competences as the basis for an overall assessment of the level of active participation. Compulsory assignments and projects etc. must be handled in and passed, in order to be study active and hence qualify to do examinations.

The Automotive Technology is a two-year comprised education and it is expected that the student participates as an active student. It is the responsibility of the student to lay out the framework for own learning process in order to get maximum benefit from the education.

An active student will:

- Turn up for all teaching activities
- Be prepared for each lesson / project work
- Be active in each lesson / project work

During the education it is required that certain elements, such as projects, specialisation-related days and weeks, study trip and other activities, are completed / passed in order to enter for exams. This applies to both the below mentioned projects as well as to other activities.

A student who repeatedly is registered as absent will be called for a personal meeting where the level of activity is evaluated. If the student doesn´t improve the activity level, he/she may be asked to do a written test in order to assess if the vocational level is satisfactory. If the student fails to better the absence or not hand in the written test, the student may not be permitted to take tests or exams.

7.5. Criteria for an evaluation of study activity

Study activity is prerequisite for being entitled to the State Educational Grant and Loan Scheme (SU).

Study activity implies the student turning up for the obligatory examinations and handing in the obligatory assignments, projects etc. affiliated with the education. Furthermore the study activity does imply that the student observes the compulsory attendance.

Compulsory assignments and projects, etc. on the degree program must be handed in so that the student can be considered to be study active and thus set as a test.

There will be access to a plan for the semester's tests and tests, as well as a description of each assignment and projects, etc., for each semester at the intranet of the Business Academy. Refer to the individual progress plans for further information on mandatory assignments and projects on the program.

7.5.1 Study start test

1st semester students must participate and pass a *study start test* to continue on the education. The purpose of the study start test is to clarify, whether the student has actually started the education.

The study start test must be held 2 months after the beginning of the semester at the latest, and the result will be communicated to the student as passed/not passed respectively “approved” or “not approved” 2 weeks after the examination at the latest.

Has the examination not been passed, the student has the opportunity to participate in a re-examination, which will be held 3 months after the beginning of the 1st semester at the latest. The student will be given two attempts to pass the study start test. The examination is not subject to the rules in the executive order on examination regulations regarding complaints about examinations.

Should the student fail to pass the study start test the student will be expelled from the education.

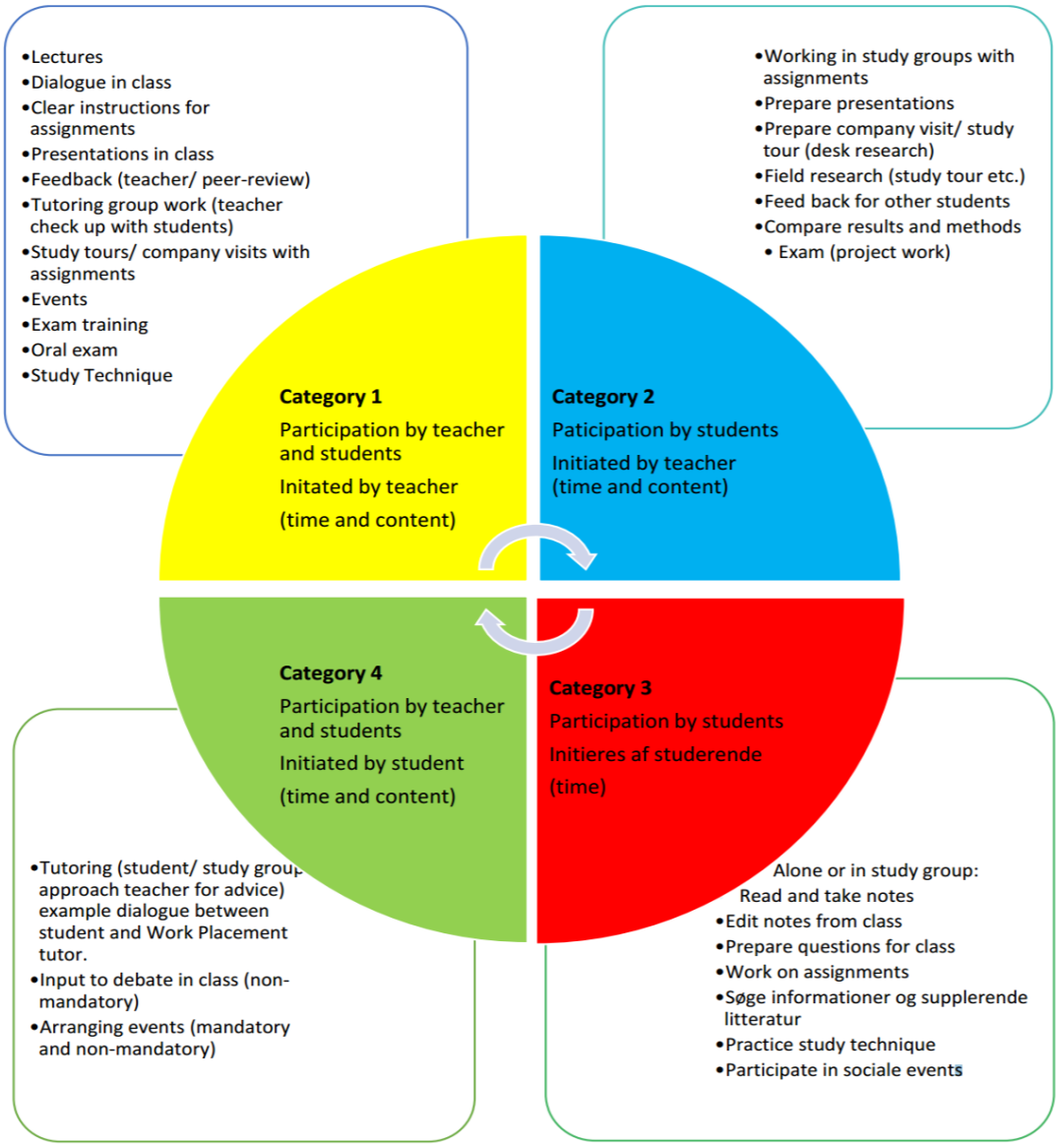
Prerequisite re-quirements	That the student has a total absence of less than 10% from the start of the studies until the start of the study.
Form	Individual written multiple choice test
Placement	• No later than 2 months after study start • Learning objectives in the national section

Description of the examination	The test consists of • a test at the level of knowledge within the framework of the subjects covered since the start of study • an assessment of student activity, including both presence and completion of assignments
Duration	60 minutes
Contents related extent (formalia)	Not relevant
Evaluation	Internal assessment
Evaluation criteria	Passed or Not Passed/ "Approved" or Not Approved "
Language	English
Aids	All aisds are allowed
Deadline for cancellation	See Dania's Exam Regulation

7.6. The study activity model

When a student starts at Dania Academy, he or she will be introduced to activities and a study programme, which may differ from what he or she has previously been introduced to elsewhere. It is expected that the effort contributed by the student is consistent with that of a fulltime occupation. The education is practice-based, which means that besides the internship course there will continuously be held meetings with the business/profession during the education.

Many different types of activities are included in a study. Some of these will be on the student's own initiative, others will be designed by the education. Some of these the students performs themselves, either alone or in a group of fellow students, others the students will perform together with the education's teaching staff, and others again will be performed together with companies, either during the internship, or in connection with company visits, projects etc.
The education on Dania Academy is organized based on the following model for study activity, where the activities are divided into 4 categories:



The study activity model is based on the work that the student has to provide in the study. Each semester corresponds to 825 hours, which in turn equals 30 ECTS. An ECTS therefore corresponds to 27.5 hours of work.

7.6.1 Teaching and working

The educations' knowledge base is business and profession based as well as development based. It being business and profession based involves that the education is based on new knowledge of central trends within the business or profession the education is aimed towards.

It being development based involves the education being based on new knowledge from experimental and developmental work that is relevant to the business or the profession, the education is aimed towards. The focus on the continuous development furthermore involves that the education is based on new knowledge from research units, relevant to the core areas that are constituent for the purpose and business purpose of the education.

The teaching is conducted through lectures, classroom teaching, dialogue teaching, exercises, online teaching, presentations, cases, seminars, guest teachers from home and abroad, projects and company stays.

7.7. Parts of the education that can be completed abroad

The education is thus organized that the student may complete parts of the education abroad within the prescribed period of study.

The 3rd semester of the Automotive Technology education can be taken abroad. Likewise, internships may be done abroad. The internship company is approved in accordance with the general rules for the internship.

7.8. Rules on credit - the institutional part

The Rules for credit in the institutional part follow the rules on credit in the national part, see above.

7.9. Credit between the higher educations

Some Academy Profession programmes offer the possibility for credit, if you apply for certain undergraduate programmes. It may be both special credit courses, or credit during the ordinary courses, meaning you may start the courses later, for instance the 2nd year of study, or that you may skip some of the subjects during the education.

For further reading, see:
https://www.ug.dk/uddannelser/artikleromuddannelser/merit/merit-mellem-de-videregaaende-uddannelser

or contact the educational guidance counsellor for further relevant information.

7.10. Leave of absence

A student may take a leave of absence from the education for personal reasons. Further information on leave of absence, and the regulations on the student taking a leve of absence are to be found in the *executive order on admission to Academy Profession programmes and professional bachelor educations*.

7.11. Dispensation

The institution may, when it deems it justified because of unusual conditions, choose to grant dispensation from the regulations in the curriculum that are laid down by the institution or the institutions alone. The institutions cooperate on a uniform dispensation practice.

7.12. Foreign languages

The majority of the education's teaching material is in English, and parts of the education may be taught in English.

No further knowledge in foreign languages is required, other than what is described in the executive order in admission.

7.13. Current legislation

https://ufm.dk/lovstof/gaeldende-love-og-regler/uddannelser/erhvervsakademiuddannelser

8. Commencement and transitional schemes

This part of the national curriculum is valid from 01.09.2018 and is valid for students who are enrolled after 30.6.2018.