



Häme University of Applied Sciences

Degree Certificate

No. 2103294

Mohammed Ali Hussein Al-Saadi



has completed the

BACHELOR'S DEGREE IN BUSINESS ADMINISTRATION TRADENOMI (AMK), BACHELOR OF BUSINESS ADMINISTRATION

in the
Degree Programme in Computer Applications
with the grades listed in the Appendix.

Hämeenlinna, Finland, 30 August 2024

Pertti Puusaari President OF POPLED SCIENCES ANNATTIKORKE KOULU





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Student Mohammed Ali Hussein Al-Saadi 16.08.2021—30.08.2024

Personal identity code Graduated

Student number 2103294 Credits 210 cr Programme Degree Programme in Computer Applications Completed 210 cr

Studies	Credits	Assessment	Date
Core Competence	135 cr		
Introduction to IT studies	15 cr		
Orientation & DIILI	3 cr	HYV	29.10.2021
Basics of programming	5 cr	4	21.10.2021
Operating systems	5 cr	4	11.11.2021
Finnish 1	2 cr	HYV	01.11.2021
Introduction to software development	15 cr		
Databases	3 cr	4	17.12.2021
Object-oriented programming	4 cr	4	06.01.2022
Basics of data analysis	3 cr	3	14.12.2021
Computer networks & security	3 cr	4	07.01.2022
Finnish 2	2 cr	5	01.11.2021
Web development	15 cr		
Building a static website	4 cr	3	31.01.2022
Web programming	5 cr	4	06.04.2022
Content management systems	3 cr	4	05.04.2022
Finnish 3	3 cr	5	01.11.2021
Optional core competence	15 cr		
Finnish 4	3 cr	5	01.11.2021
Software development	12 cr		
Web Services	5 cr	4	23.05.2022
Software Development Tools	3 cr	4	23.05.2022
Server programming	4 cr	4	02.05.2022
Customer projects	15 cr		
Data Processing with Python	4 cr	5	20.11.2022
Software Testing	3 cr	5	09.11.2022
Design Factory Project	5 cr	4	04.11.2022
Communication in Customer Projects	3 cr	5	11.11.2022
Business analytics	15 cr		
Predictive Analytics with Python	5 cr	5	22.01.2023
Foundations of Data Engineering	5 cr	5	22.01.2023
Digital and Social Media Analytics	5 cr	5	15.12.2022
Automating business processes	15 cr		
Software Robotics and Automation	6 cr	5	29.04.2023
Software Design	4 cr	4	04.04.2023
Minithesis	5 cr	HYV	13.04.2023
Work Placement	30 cr		
Work Placement	30 cr	HYV	04.06.2024
Work placement, part 1	30 cr	HYV	04.06.2024
Profiling competence	60 cr		
Mobile programming	15 cr		
Virtualization Techniques for Software Developers	4 cr	5	10.10.2023



Student	Mohammed Ali Hussein Al-Saadi				
Student number	2103294				
Cross-platform Development		5 cr		4	30.10.2023
Mobile Programming		6 cr		5	13.11.2023
Data science		15 cr			
Mathematics for Data Python	Science with	6 cr		1	23.05.2023
Big Data Technologie	S	3 cr		5	10.05.2023
Applied Machine Lear	rning	6 cr		5	09.06.2023
ICT project		15 cr			
ICT Project Implemen	tation	8 cr		5	22.12.2023
ICT Project Specificat Management	tion and	4 cr		5	22.12.2023
Communication in IC7	Γ Project	3 cr		5	15.12.2023
Professional Skills		15 cr			
Orientation to Finnish Society	Culture and	2 cr		HYV	19.10.2021
Exploring Artificial Int	elligence	2 cr	s1	HYV	24.06.2024
Endpoint Security		2 cr	s2	HYV	08.07.2024
Introduction to Cyber	security	2 cr	s3	HYV	08.07.2024
NodeJS		3 cr	s4	HYV	18.06.2024
Discovering Entrepre	neurship	1 cr	s5	HYV	19.08.2024
Power Platform App N	Maker PL-100	3 cr	s6	HYV	26.08.2024
Final thesis		15 cr			
Thesis – Planning		5 cr		4	29.04.2024
Thesis – Implementation		5 cr		4	07.05.2024
Thesis – Finishing		5 cr		4	03.06.2024
Thesis – Maturity Test				HYV	03.06.2024

Bachelor's Thesis Title: Enhancing API reliablity in Kalibro.io

Assessment: 4

Assessment date: 3.6.2024

Inclusions

- s1 = Exploring Artificial Intelligence, 24.6.2024, Kajaani University of Applied Sciences
- s2 = Endpoint Security, 8.7.2024, Metropolia University of Applied Sciences
- s3 = Introduction to Cybersecurity, 8.7.2024, Metropolia University of Applied Sciences
- s4 = NodeJS, 18.6.2024, Metropolia University of Applied Sciences
- s5 = Discovering Entrepreneurship, 19.8.2024, Metropolia University of Applied Sciences
- s6 = Power Platform App Maker PL-100, 26.8.2024, Metropolia University of Applied Sciences

Häme University of Applied Sciences has been granted an operating licence by the Council of State. Education is governed by the Universities of Applied Sciences Act (932/2014) and the Government Decree on Universities of Applied Sciences (1129/2014). The qualification and the competence conferred by the qualification are specified in the Decree on the Higher Education System (464/1998). The level of the qualification corresponds to the competence level 6 in the Finnish National Framework for Qualifications and Other Competence Modules (FiNQF). Finnish higher education institutions assess student work load according to the European Credit Transfer and Accumulation System (ECTS).

The degree was completed in English.





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Student Mohammed Ali Hussein Al-Saadi

Student number 2103294

The graduate submitted the proof of maturity included in the Bachelor's thesis in English.

The graduate has gained such oral and written skills in the obligatory English language required by the degree programme that are necessary for practising the profession and for further professional development (Decree 1129/2014, Section 7). THE WANTE UNIVERSITY OF POPLED SCIENCES THAT THE WANTE OF THE POPLED SCIENCES TO THE POPLED

Hämeenlinna 30.8.2024

President

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Hämeen ammattikorkeakoulu

Tutkintotodistus

Nro 2103294

Mohammed Ali Hussein Al-Saadi



on suorittanut

LIIKETALOUDEN AMMATTIKORKEAKOULUTUTKINNON TRADENOMI (AMK), BACHELOR OF BUSINESS ADMINISTRATION

Computer Applications -koulutuksessa

liitteessä mainituin arvosanoin.

Hämeenlinna 30. elokuuta 2024

Pertti Puusaari rehtori

THE WANNATTIKORKE AKOULU

Tutkintotodistuksen liite



30.8.2024 sivu 1/3

Opiskelija Mohammed Ali Hussein Al-Saadi 16.08.2021—30.08.2024

Henkilötunnus Valmistunut
Opiskelijanumero 2103294 Laajuus

Opiskelijanumero 2103294 Laajuus **210 op**Ohjelma Computer Applications -koulutus Suoritettu **210 op**

Opinnot	Laajuus	Arviointi	Pvm
Core competence	135 op		
Introduction to IT studies	15 op		
Orientation & DIILI	3 op	HYV	29.10.2021
Basics of programming	5 op	4	21.10.2021
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Opiskelijanumero	2103294				
Mobile Programming Project		6 op		5	13.11.2023
Data science		15 op			
Mathematics for	Data Science with Python	6 ор		1	23.05.2023
Big Data Technol	ogies	3 ор		5	10.05.2023
Applied Machine	Learning	6 ор		5	09.06.2023
ICT project		15 op			
ICT Project Imple	mentation	8 op		5	22.12.2023
ICT Project Speci	fication and Management	4 op		5	22.12.2023
Communication in	n ICT Project	3 ор		5	15.12.2023
Professional skills		15 op			
Orientation to Fin	nish Culture and Society	2 op		HYV	19.10.2021
Exploring Artificia	al Intelligence	2 op	s1	HYV	24.06.2024
Endpoint Security	/	2 op	s2	HYV	08.07.2024
Introduction to C	ybersecurity	2 op	s3	HYV	08.07.2024
NodeJS		3 ор	s4	HYV	18.06.2024
Discovering Entre	epreneurship	1 op	s5	HYV	19.08.2024
Power Platform A	pp Maker PL-100	3 ор	s6	HYV	26.08.2024
Final thesis		15 op			
Thesis - Planning		5 op		4	29.04.2024
Thesis – Implementat	tion	5 op		4	07.05.2024
Thesis – Finishing		5 op		4	03.06.2024
Thesis – Maturity Tes	st			HYV	03.06.2024

Opinnäytetyö: Enhancing API reliablity in Kalibro.io

Arviointi: 4

Arviointipäivämäärä: 3.6.2024

Sisältyvyydet

- s1 = Exploring Artificial Intelligence, 24.6.2024, Kajaanin ammattikorkeakoulu
- s2 = Endpoint Security, 8.7.2024, Metropolia Ammattikorkeakoulu
- s3 = Introduction to Cybersecurity, 8.7.2024, Metropolia Ammattikorkeakoulu
- s4 = NodeJS, 18.6.2024, Metropolia Ammattikorkeakoulu
- s5 = Discovering Entrepreneurship, 19.8.2024, Metropolia Ammattikorkeakoulu
- s6 = Power Platform App Maker PL-100, 26.8.2024, Metropolia Ammattikorkeakoulu

Hämeen ammattikorkeakoululla on valtioneuvoston myöntämä toimilupa. Koulutusta säätelee ammattikorkeakoululaki (932/2014) sekä valtioneuvoston asetus ammattikorkeakouluista (1129/2014). Tutkintoa ja tutkinnon tuottamaa kelpoisuutta määrittää asetus korkeakoulututkintojen järjestelmästä (464/1998). Ammattikorkeakoulututkinto vastaa Suomen tutkintojen ja muiden osaamiskokonaisuuksien viitekehyksen tasomäärittelyssä tasoa 6 (Finnish National Framework for Qualifications and Other Competence Modules, FiNQF). Suomalaiset korkeakoulut noudattavat opintojen mitoituksessa eurooppalaista opintosuoritusten ja arvosanojen siirto- ja kertymisjärjestelmää (European Credit Transfer and Accumulation System, ECTS).

Tutkinto on suoritettu englannin kielellä.

Tutkinnon suorittanut on antanut opinnäytetyöhön sisältyvän kypsyysnäytteen englannin kielellä.

Tutkinnon suorittanut on saavuttanut koulutusohjelman pakollisessa vieraassa kielessä sellaisen englannin suullisen ja kirjallisen taidon, joka ammatin harjoittamisen ja ammatillisen kehityksen kannalta on tarpeellinen





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Opiskelija Opiskelijanumero Mohammed Ali Hussein Al-Saadi

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(asetus 1129/2014, 7 §).

Hämeenlinna 30.8.2024

Pertti Puusaari rehtori



Tämä dokumentti on sähköisesti allekirjoitettu ja sen aitouden voi todentaa alkuperäisestä tiedostosta. Varmentaminen on mahdollista osoitteessa https://www.hamk.fi/opiskelu-hamkissa/sahkoinen-allekirjoitus/ tai Digi- ja väestötietoviraston palvelussa osoitteessa https://dvv.fineid.fi/validation



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This Diploma Supplement follows the model developed by the European Commission, Council of Europe and UNESCO/CEPES. The purpose of this supplement is to provide sufficient independent data to improve the international 'transparency' and fair academic and professional recognition of qualifications (diplomas, degrees, certificates, etc.) It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free of any value-judgements, equivalence statements or suggestions about recognition. Information should be provided in all eight sections. Where information is not provided, a reason should be given.

1 INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

1.1 Family name(s) Al-Saadi

1.2 Given name(s) Mohammed Ali Hussein

1.3 Date of birth (day.month.year) 21.3.1990 Student identification number or code 1.4 2103294

(if available)

2 INFORMATION IDENTIFYING THE QUALIFICATION

2.1 Name of qualification and title conferred Liiketalouden ammattikorkeakoulututkinto

(in original language) Tradenomi (AMK) / Bachelor of Business Administration

Main field(s) of study for the 2.2 Degree Programme in Computer Applications

qualification 2.3 Name and status of awarding institution

(in original language)

Hämeen ammattikorkeakoulu

(Häme University of Applied Sciences)

State recognised University of Applied Sciences

The quality assurance system of the university has passed the audit conducted by the Finnish Education Evaluation

Centre. Further information: www.karvi.fi

2.4 Name and status of institution (if Not applicable

different from 2.3) administering studies (in original language)

Language(s) of instruction/examination 2.5 English

3 INFORMATION ON THE LEVEL OF THE QUALIFICATION

Level of qualification 3.1 First-cycle polytechnic degree. See 8. 3.2 210 credits (3.5 years of full time study)

Official length of programme Finnish credits are fully compatible with the ECTS.

3.3 Access requirement(s) See 8. There is a numerus clausus, i.e. restricted entry, to

all fields of study.

INFORMATION ON THE CONTENTS AND RESULTS GAINED

4.1 Mode of study Full-time

4.2 See 8 and Degree certificate appendix. Programme requirements

4.3 Programme details (e.g. modules or units See Degree certificate appendix.

studied, and individual

grades/marks/credits obtained)



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4.4 Grading scheme and, if available, grade

distribution guidance

5 = Excellent 4-3 = Good

2-1 = Satisfactory

HYL = Fail HYV = Approved V = Exempt

4.5 Overall classification of the qualification

(in original language)

Not applicable

5 INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1 Access to further study Eligible for second-cycle higher education studies

5.2 Professional status (if applicable)

Under the Finnish legislation, a person who has taken Liiketalouden ammattikorkeakoulututkinto, Tradenomi (AMK) is qualified for posts or positions in the public sector for which the qualification requirement is a firstcycle higher education degree. In some cases, the qualification requirement also includes the completion of studies in certain specified fields of study. The degree falls under the Article 11 of the Directive 2005/36/EC of the European Parliament and of the Council on the recognition of professional qualifications, level d.

6 **ADDITIONAL INFORMATION**

6.1 Additional information Hämeen ammattikorkeakoulu has been awarded the Diploma Supplement Label.

Further information sources 6.2

www.hamk.fi, Häme University of Applied Sciences www.minedu.fi, Ministry of Education and Culture

www.oph.fi/recognition,

www.oph.fi/qualificationsframework

The Finnish National Board of Education, (The National Academic Recognition Information Centre (NARIC, the

National Coordination Point for the European

Qualifications Framework (EQF)

www.karvi.fi, The Finnish Education Evaluation Centre

HAME UNIVERSITY OF TO

7 **CERTIFICATION OF THE SUPPLEMENT**

7.1 Date 7.2 Signature Hämeenlinna, 30.8.2024

Pertti Puusaari President

THANKEN ANNATTIKORKEAKOULU at arvices age This document is electronically signed. The authenticity of the document can be verified from the original file at https://www.hamk.fi/verifying-electronic-documents/?lang=en or at the website of Digital and population data services agency https://dvv.fineid.fi/en/validation



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8 INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

The description of the higher education system has been prepared by the Finnish National Board of Education and approved by the Ministry of Education and Culture.

The Finnish education system consists of pre-primary and basic education, general and vocational upper secondary education, higher education and adult education. The compulsory schooling consists of one-year pre-primary education for 6-year-olds and nine-year basic education for children aged 7-16.

Post-compulsory education is given by general upper secondary schools and vocational institutions. The general upper secondary school provides a three-year general education curriculum, at the end of which the pupil takes the national Matriculation examination (ylioppilastutkinto/studentexamen). Vocational institutions provide three-year programmes, which lead to upper secondary vocational qualifications (ammatillinen perustutkinto/yrkesinriktad grundexamen).

General eligibility for higher education is given by the Matriculation examination, the upper secondary vocational qualification, the further vocational qualification and the specialist vocational qualification.

A foreign qualification that gives eligibility for higher education in the system the qualification belongs to gives general eligibility for higher education also in Finland.

The Finnish higher education system comprises universities (yliopisto/universitet) and universities of applied sciences (ammattikorkeakoulu, AMK/yrkeshögskola, YH). The universities engage both in education and research and have the right to award doctorates. The universities of applied sciences are multi-field institutions of professional higher education. Universities of applied sciences engage in applied research and development.

First and second cycle higher education studies are measured in credits (opintopiste/studiepoäng). Study courses are quantified according to the work load required. One year of full-time study is equivalent to 1600 hours of student work on average and is defined as 60 credits. The credit system complies with the European Credit Transfer and Accumulation System (ECTS).

8.1. University degrees

The Government Decree on University Degrees and Specialisation Studies (794/2004 including amendments) defines the objectives, extent and overall structure of degrees. The universities decide on the detailed contents and structure of the degrees they award. They also decide on their curricula and forms of instruction.

8.1.1. First cycle university degree

The first cycle university degree consists of at least 180 credits (three years of full-time study). The degree is called kandidaatti/kandidat in all fields of study except for Law (oikeusnotaari/rättsnotarie) and Pharmacy (farmaseutti/farmaceut). The determined English translation for all of these degrees is Bachelor's degree, the most common degree titles being Bachelor of Arts and Bachelor of Science.

Studies leading to the degree provide the student with: (1) knowledge of the fundamentals of the major and minor subjects or corresponding study entities or studies included in the degree programme and the prerequisites for following developments in the field, (2) knowledge and skills needed for scientific thinking and the use of scientific methods or knowledge and skills needed for artistic work, (3) knowledge and skills needed for studies leading to a higher university degree and for life-long learning, (4) a capacity for applying the acquired knowledge and skills to work and in international co-operation, and (5) adequate language and communication skills for working in one's own field and for international work and co-operation.



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Studies leading to the degree may include: basic and intermediate studies; language and communication studies, interdisciplinary programmes, and other studies and work practice for professional development. The degree includes a Bachelor's thesis (6 – 10 credits).

8.1.2. Second cycle university degree

The second cycle university degree consists of at least 120 credits (two years of full-time study). The degree is usually called maisteri/magister. Other second cycle degree titles are diplominsinööri/diplomingenjör (Technology), proviisori/provisor (Pharmacy) and arkkitehti/arkitekt (Architecture). The determined English translation for all these degrees is Master's degree, the most common degree titles being Master of Arts and Master of Science. The second cycle university degree title in the fields of Medicine, Veterinary Medicine and Dentistry is lisensiaatti/licentiat, the English title being Licentiate. The admission requirement for the second cycle university degree is a first cycle degree.

In the fields of Medicine and Dentistry the university may arrange the education leading to the second cycle university degree without including a first cycle university degree in the education. In Medicine the degree consists of 360 credits (six years of full-time study) and in Dentistry the degree consists of 330 credits (five and a half years of full-time study).

Studies leading to the second cycle university degree provide the student with: (1) good overall knowledge of the major subject or a corresponding entity and conversance with the fundamentals of the minor subject or good knowledge of the advanced studies included in the degree programme; (2) knowledge and skills needed to apply scientific knowledge and scientific methods or knowledge and skills needed for independent and demanding artistic work; (3) knowledge and skills needed for independently operating as an expert and developer of the field and for international co-operation; (4) knowledge and skills needed for scientific or artistic postgraduate education and for life-long learning; and (5) good language and communication skills for working in one's own field and for international work and co-operation.

The studies leading to the second cycle university degree may include: basic and intermediate studies and advanced studies, language and communication studies; interdisciplinary studies, other studies, and internship improving expertise. The degree includes a Master's thesis (20 – 40 credits).

8.2. Doctoral degrees

Students can apply for doctoral studies after the completion of a second cycle degree. The aim of doctoral studies is to provide student with an in-depth knowledge of their field of research and capabilities to produce novel scientific knowledge independently.

The degree of lisensiaatti/licentiat (Licentiate) may be taken before the Doctor's degree and in general it takes two years of full-time study to complete.

The Doctor's degree takes approximately four years to complete after a second cycle degree and two years when completed after a Licentiate's degree. A student who has been admitted to complete the Doctor's degree must complete a given amount of studies, show independent and critical thinking in the field of research and write a Doctor's dissertation and defend it in public.

8.3. University of applied sciences degrees

The Universities of Applied Sciences Act (932/2014 including amendments) defines the objectives, extent and overall structure of universities of applied sciences degrees. The universities of applied sciences decide on the detailed contents and structure of the degrees they award. They also decide on their curricula and forms of instruction.



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8.3.1. First cycle university of applied sciences degrees

The first cycle university of applied sciences degree consists of 180, 210, 240 or 270 credits (three to four and a half years of full-time study) depending on the field of study. The first cycle university of applied sciences degree is called ammattikorkeakoulututkinto/yrkeshögskoleexamen. The determined English translation for the degree is Bachelor's degree. The degree titles indicate the field of study, e.g. Bachelor of Engineering and Bachelor of Health Care.

Studies leading to the degree provide the student with: (1) broad overall knowledge and skills with relevant theoretical background for working as expert of the field, (2) knowledge and skills needed for following and advancing developments in the field, (3) knowledge and skills needed for professional development and life-long learning, and (4) adequate language and communication skills for working in one's own field and for international work and co-operation.

The first cycle university of applied sciences degree comprises basic and professional studies, elective studies, a practical training period, and a final project.

8.3.2. The second cycle university of applied sciences degrees

The second cycle university of applied sciences degree consists of 60 or 90 credits (a year or a year and a half of full-time study). The degree is called ylempi ammattikorkeakoulututkinto/högre yrkeshögskoleexamen. The determined English translation for the degree is Master's degree. The degree titles indicate the field of study, e.g. Master of Culture and Arts or Master of Business Administration. Eligibility for second cycle university of applied sciences degrees is given by a relevant first cycle degree together with at least three years of relevant work or artistic experience.

Studies leading to the degree provide the student with: (1) broad and advanced knowledge and skills for developing the professional field as well as the theoretical skills for working in demanding expert and leadership positions in the field, (2) profound understanding of the field, its relation to working life and society at large as well as the knowledge and skills needed for following and analysing both theoretical and professional developments in the field, (3) capacity for life-long learning and continuous development of one's own expertise, and (4) good language and communication skills for working in one's own field and for international work and co-operation.

The second cycle university of applied sciences degree comprises advanced professional studies, elective studies, and a final project.