Yukesh Karki *Aerospace Engineer*

yukeshkarki34@gmail.com +977-9862164300 Sunsari, Nepal Nepali

https://www.linkedin.com/in/yukesh-karki-2b05bb1a4/

Education

2018 – 2023
Lalitpur, Nepal

Bachelors in Aerospace Engineering
IOE Pulchowk, Tribhuvan University
Percentage: 76.28%
Relevant Courses: Fluid dynamics, Aerodynamics, Numerical methods, Finite element methods, Computational fluid dynamics, Compressible aerodynamics, Hypersonics, Fundamentals of thermodynamics and heat transfer, Applied thermodynamics and heat transfer, Aircraft Propulsion

Research Experience

2024/06 – Present
Birmingham, UK

Research Intern
BioFSILab
Research Topic: Wake Dynamics of a Flexible Flapping Airfoil
Supervisor: Dr. Chandan Bose, University of Birmingham

2024/03 – 2024/06

CFD Research Intern
FOSSEE, IIT Bombay, Semester Long Internship
Research Topic: Aerodynamics of Bristled Wings
Supervisor: Dr. Chandan Bose, University of Birmingham

2022/06 – 2023/03
Lalitpur, Nepal

Bachelor Thesis
IOE Pulchowk, TU
Title: Fabrication of particle image velocimetry setup for experimentation at low Reynolds number

- This project work was completed in partial fulfillment of the requirement for Bachelors degree in Aerospace Engineering.
- Designed a Particle Image Velocimetry (PIV) setup using CATIA, ensuring it was well-designed and functional through thorough analysis.
- Manufactured the PIV setup using various fabrication techniques, resulting in a fully operational system.
- Conducted a comparative analysis with results obtained from numerical simulation.

Supervisors: Asst. Prof. Neeraj Adhikari and Asst. Prof. Kamal Darlami
Skills: CATIA, SolidWorks, ANSYS Fluent, Arduino, Python

2022/10 – 2022/12
Kathmandu, Nepal

Research Intern
Antarikchya Pratisthan Nepal

- Conducted feasibility analysis on design and development of low cost Thermal Vacuum Chamber for CubeSat testing in Nepal.
- Performed preliminary design and analysis of thermal vacuum chamber for testing of 6U CubeSats.
- Prepared detailed report and delivered presentations on research findings.
- Poster presentation on research finindings on International Space Day held at Nepal Academy of Science and Technology (NAST).

Skills: CATIA, SolidWorks, ANSYS, Python

Lalitpur, Nepal

Other Academic Projects/Experience
IOE Pulchowk, TU

- Design of UAV and 40 seater Jet Aircraft (Subject: Flight Dynamics and Aricraft Preliminary Design)
- Effect of flow pattern in four diffusers with an increasing divergence angle (Subject: Aircraft Propulsion)

Volunteer and Work Experience

2023/08 – 2024/03
Lalitpur, Nepal

Design and Simulation Engineer
Voyager Mayeen

- Responsible for research and design of aerospace propulsion systems.
- Responsible for conducting CFD simulations and structural & thermal analyses to enhance the reliability and efficiency of aerospace components
- Responsible for providing guidance and supervision to interns.

Skills: CATIA, SolidWorks, Python, OpenFOAM, ANSYS

2022/04 – 2022/12
Lalitpur, Nepal

Volunteer and Member of Students' Committee
International Conference on Vibration Engineering and Technology of Machinery (*VETOMAC*)

- Led committee members and coordinated to organize activities for student attendees, such as workshops, poster sessions and social events.
- Actively participated as a conference volunteer, facilitating session logistics, coordinating with presenters, and overseeing conference sessions.

2020
Lalipur, Nepal

Volunteer
MechTRIX (*National Mechanical and Aerospace Engineering Expo*)

- Assisted the organizing committee in successfully organizing a water rocket competition for secondary-level students

Skills

CAD/Analysis
CATIA, SolidWorks, OpenFOAM, ANSYS

Programming
C, Python

Miscellaneous
Linux, LATEX(Overleaf), Microsoft Office, Adobe Creative Cloud

Soft Skills
Time Management, Teamwork, Problem-solving, Documentation

Languages

Nepali
Native Proficiency

English
Professional Proficiency

Declaration

I declare you that the information given above is true to the best of my knowledge and belief.

Issue No. 42

Tribhuvan University
Office of the Controller of Examinations
Balkhu, Kathmandu

TRIBHUVAN UNIVERSITY

OFFICE OF THE CONTROLLER OF EXAMINATIONS

KATHMANDU

NEPAL

ACADEMIC TRANSCRIPT

Name of Student : Yukesh Karki

Registration No : 3-2-23-512-2018

Institute : Engineering

Campus : Pulchowk Campus

Examination : Bachelor's Degree in Aerospace Engineering

Course Duration : 4 Years 16 AUG 2023

Name :- Yukesh Karki

T. U. Regd. No. :- 3-2-23-512-2018

Tribhuvan University
Office of the Controller of Examinations
Balkhu, Kathmandu

Ist Year Ist Part

Subject/s appeared in the examination		Full Marks			Pass Marks			Exam attended Year and Roll No. 2019 and 12448			Exam attended Year and Roll No. 2022 and 14307			Exam attended Year and Roll No.			Exam attended Year and Roll No.			Exam attended Year and Roll No.		
								Marks Secured			Marks Secured			Marks Secured			Marks Secured			Marks Secured		
		Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total
CE401	Applied Mechanics	20	80	100	8	32	40	20	33	53												
EE401	Basic Electrical Engineering	20	80	100	8	32	40	12	53	65												
EE401	Basic Electrical Engineering (Practical)	25	-	25	10	-	10	22	-	22												
ME401	Engineering Drawing I (Practical)	60	40	100	24	16	40	50	31	81												
ME403	Workshop Technology	10	-	10	4	-	4	9	-	9												
ME403	Workshop Technology (Practical)	40	-	40	16	-	16	38	-	38												
SH401	Engineering Mathematics I	20	80	100	8	32	40	20	55	75												
SH402	Engineering Physics	20	80	100	8	32	40				8	32	40									
SH402	Engineering Physics (Practical)	20	30	50	8	12	20	18	23	41												

Ist Year IInd Part

Subject/s appeared in the examination		Full Marks			Pass Marks			Exam attended Year and Roll No. 2019 and 11898			Exam attended Year and Roll No. 2021 and 10462			Exam attended Year and Roll No.			Exam attended Year and Roll No.			Exam attended Year and Roll No.		
								Marks Secured			Marks Secured			Marks Secured			Marks Secured			Marks Secured		
		Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total
CT452	Computer Programming	20	80	100	8	32	40	18	64	82												
CT452	Computer Programming (Practical)	50	-	50	20	-	20	48	-	48												
EX451	Basic Electronics Engineering	20	80	100	8	32	40	20	48	68												
EX451	Basic Electronics Engineering (Practical)	25	-	25	10	-	10	25	-	25												
ME451	Engineering Drawing II (Practical)	60	40	100	24	16	40				57	28	85									
ME452	Fundamental of Thermodynamics & Heat Transfer	20	80	100	8	32	40	11	49	60												
ME452	Fundamental of Thermodynamics & Heat Transfer (Practical)	25	-	25	10	-	10	20	-	20												
SH451	Engineering Mathematics II	20	80	100	8	32	40	20	33	53												
SH453	Engineering Chemistry	20	80	100	8	32	40	19	50	69												
SH453	Engineering Chemistry (Practical)	20	30	50	8	12	20	18	27	45												
Total				1375			550			979												

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16 AUG 2023

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T. U. Regd. No. :- 3-2-23-512-2018

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IInd Year Ist Part

Subject/s appeared in the examination		Full Marks			Pass Marks			Exam attended Year and Roll No. 2020 and 25848			Exam attended Year and Roll No.			Exam attended Year and Roll No.			Exam attended Year and Roll No.			Exam attended Year and Roll No.		
								Marks Secured			Marks Secured			Marks Secured			Marks Secured			Marks Secured		
		Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total
AS501	Fundamentals of Aerospace Engineering	20	80	100	8	32	40	14	54	68												
AS502	Fluid Dynamics	20	80	100	8	32	40	14	49	63												
AS502	Fluid Dynamics (Practical)	25	-	25	10	-	10	21	-	21												
AS503	Computer Aided Design & Manufacturing	20	80	100	8	32	40	16	66	82												
AS503	Computer Aided Design & Manufacturing (Practical)	25	-	25	10	-	10	21	-	21												
EE504	Control System	20	80	100	8	32	40	15	43	58												
EE504	Control System (Practical)	25	-	25	10	-	10	20	-	20												
ME502	Engineering Mechanics	20	80	100	8	32	40	15	41	56												
SH501	Engineering Mathematics III	20	80	100	8	32	40	15	60	75												

IInd Year IInd Part

Subject/s appeared in the examination		Full Marks			Pass Marks			Exam attended Year and Roll No. 2021 and 71248			Exam attended Year and Roll No.			Exam attended Year and Roll No.			Exam attended Year and Roll No.			Exam attended Year and Roll No.		
								Marks Secured			Marks Secured			Marks Secured			Marks Secured			Marks Secured		
		Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total
AS551	Aerospace Materials	20	80	100	8	32	40	20	46	66												
AS551	Aerospace Materials (Practical)	25	-	25	10	-	10	16	-	16												
AS552	Aerodynamics	20	80	100	8	32	40	18	60	78												
AS552	Aerodynamics (Practical)	25	-	25	10	-	10	23	-	23												
AS553	Applied Thermodynamics & Heat Transfer	20	80	100	8	32	40	17	47	64												
AS553	Applied Thermodynamics & Heat Transfer (Practical)	25	-	25	10	-	10	24	-	24												
ME552	Strength of Materials	20	80	100	8	32	40	17	40	57												
ME552	Strength of Materials (Practical)	25	-	25	10	-	10	23	-	23												
ME556	Theory of Mechanism & Machine I	20	80	100	8	32	40	18	42	60												
SH552	Probability & Statistics	20	80	100	8	32	40	20	54	74												
Total				1375			550			949												

16 AUG 2023

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T. U. Regd. No. :- 3-2-23-512-2018

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IIIrd Year Ist Part

	Subject/s appeared in the examination	Full Marks			Pass Marks			Exam attended Year and Roll No. 2021 and 39148			Exam attended Year and Roll No.			Exam attended Year and Roll No.			Exam attended Year and Roll No.			Exam attended Year and Roll No.		
								Marks Secured			Marks Secured			Marks Secured			Marks Secured			Marks Secured		
		Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total
AS601	Avionics	20	80	100	8	32	40	12	44	56												
AS601	Avionics (Practical)	25	-	25	10	-	10	25	-	25												
AS602	Machine Design	20	80	100	8	32	40	17	52	69												
AS602	Machine Design (Practical)	25	-	25	10	-	10	23	-	23												
AS603	Continuum Mechanics	20	80	100	8	32	40	19	65	84												
AS603	Continuum Mechanics (Practical)	25	-	25	10	-	10	24	-	24												
AS604	Aircraft Propulsion	20	80	100	8	32	40	20	50	70												
AS604	Aircraft Propulsion (Practical)	25	-	25	10	-	10	22	-	22												
AS605	Fault Monitoring and Diagnosis	20	80	100	8	32	40	18	65	83												
AS605	Fault Monitoring and Diagnosis (Practical)	25	-	25	10	-	10	22	-	22												
SH603	Numerical Methods	20	80	100	8	32	40	20	44	64												
SH603	Numerical Methods (Practical)	50	-	50	20	-	20	50	-	50												

IIIrd Year IInd Part

	Subject/s appeared in the examination	Full Marks			Pass Marks			Exam attended Year and Roll No. 2022 and 21298			Exam attended Year and Roll No.			Exam attended Year and Roll No.			Exam attended Year and Roll No.			Exam attended Year and Roll No.		
								Marks Secured			Marks Secured			Marks Secured			Marks Secured			Marks Secured		
		Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total
AS651	Aircraft Manufacturing Process	20	80	100	8	32	40	16	69	85												
AS651	Aircraft Manufacturing Process (Practical)	50	-	50	20	-	20	48	-	48												
AS652	Aircraft Maintenance Engineering	20	80	100	8	32	40	19	48	67												
AS652	Aircraft Maintenance Engineering (Practical)	50	-	50	20	-	20	34	-	34												
AS653	Aircraft Systems	20	80	100	8	32	40	10	59	69												
AS653	Aircraft Systems (Practical)	25	-	25	10	-	10	17	-	17												
AS654	Flight Dynamics	20	80	100	8	32	40	17	51	68												
AS654	Flight Dynamics (Practical)	25	-	25	10	-	10	17	-	17												
AS655	Unmanned Air Vehicle Synthesis	20	80	100	8	32	40	17	68	85												
AS655	Unmanned Air Vehicle Synthesis (Practical)	25	-	25	10	-	10	24	-	24												
ME656	Finite Element Method	20	80	100	8	32	40	16	50	66												
ME656	Finite Element Method (Practical)	25	-	25	10	-	10	21	-	21												
Total				1575			630			1193												

16 AUG 2023

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IVth Year Ist Part

Subject/s appeared in the examination		Full Marks			Pass Marks			Exam attended Year and Roll No. 2022 and 52598			Exam attended Year and Roll No.			Exam attended Year and Roll No.			Exam attended Year and Roll No.			Exam attended Year and Roll No.		
								Marks Secured			Marks Secured			Marks Secured			Marks Secured			Marks Secured		
		Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total
AS701	Aircraft Preliminary Design	20	80	100	8	32	40	17	71	88												
AS701	Aircraft Preliminary Design (Practical)	25	-	25	10	-	10	19	-	19												
AS702	Computational Fluid Dynamics	20	80	100	8	32	40	17	67	84												
AS702	Computational Fluid Dynamics (Practical)	25	-	25	10	-	10	23	-	23												
AS703	Human Factors in Aviation	20	80	100	8	32	40	18	67	85												
AS703	Human Factors in Aviation (Practical)	25	-	25	10	-	10	24	-	24												
AS704	Aircraft Structures	20	80	100	8	32	40	17	61	78												
AS704	Aircraft Structures (Practical)	25	-	25	10	-	10	24	-	24												
AS705	Instrumentation & Sensors	20	80	100	8	32	40	19	69	88												
AS705	Instrumentation & Sensors (Practical)	25	-	25	10	-	10	23	-	23												
AS707	Project I (Practical)	50	-	50	20	-	20	47	-	47												
AS72501	Compressible Aerodynamics (Elective I)	20	80	100	8	32	40	17	68	85												
AS72501	Compressible Aerodynamics (Elective I) (Practical)	25	-	25	10	-	10	24	-	24												

IVth Year IInd Part

Subject/s appeared in the examination		Full Marks			Pass Marks			Exam attended Year and Roll No. 2023 and 41398			Exam attended Year and Roll No.			Exam attended Year and Roll No.			Exam attended Year and Roll No.			Exam attended Year and Roll No.		
								Marks Secured			Marks Secured			Marks Secured			Marks Secured			Marks Secured		
		Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total	Int.	Ext.	Total
AS751	Internship (Practical)	100	-	100	40	-	40	94	-	94												
AS752	Aviation Professional Practices	10	40	50	4	16	20	9	29	38												
AS753	Project II (Practical)	50	50	100	20	20	40	46	46	92												
AS76501	Hypersonics (Elective II)	20	80	100	8	32	40	14	67	81												
AS76501	Hypersonics (Elective II) (Practical)	25	-	25	10	-	10	23	-	23												
AS78501	Advanced Propulsion Systems (Elective III)	20	80	100	8	32	40	15	54	69												
AS78501	Advanced Propulsion Systems (Elective III) (Practical)	25	-	25	10	-	10	24	-	24												
Total				1300			520			1113												

16 AUG 2023

Name :- Yukesh Karki

T. U. Regd. No. :- 3-2-23-512-2018

Based on the weightages assigned to each year scores the aggregate full marks, marks secured and percentage are given below.

Year	I	II	III	IV	Total
Weightage %	20	20	30	30	100
Full Marks	275	275	472.5	390	1412.5
Marks Secured	195.8	189.8	357.9	333.9	1077.4

Percentage 76.28

Passed Division First Division

Passed Examination of 2079 (2023)

Tribhuvan University
Office of the Controller of Examinations
Balkhu, Kathmandu

16 AUG 2023

Date of Issue

Prepared by

Checked by

CONTROLLER OF EXAMINATIONS

Grading system of marks secured in the examination:

Distinction - 80% and above in the aggregate.
First Division - 65% and above in the aggregate.
Second Division - 50% and above in the aggregate

To pass the examination at least 40% of marks must be secured in the internal and external examinations as well as in the theory and practical examinations of each paper separately.