### Yukesh Karki Aerospace Engineer

**≥** yukeshkarki34@gmail.com

+977-9862164300

Sunsari, Nepal

**■** Nepali

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

### Education

2018 - 2023

### **Bachelors in Aerospace Engineering**

Lalitpur, Nepal

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 [2] Research Topic: Aerodynamics of Bristled Wings

Supervisor: Dr. Chandan Bose, University of Birmingham

2022/06 - 2023/03

Lalitpur, Nepal

### **Bachelor Thesis**

IOE Pulchowk, TU Z

Title: Fabrication of particle image velocimetry setup for experimentation at low Reynolds

- 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 welldesigned 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	Design and Simulation Engineer
Lalitpur, Nepal	Voyager Mayeen
	<ul> <li>Responsible for research and design of aerospace propulsion systems.</li> </ul>
	• Responsible for conducting CFD simulations and structural & thermal analyses to enhance
	the reliability and efficiency of aerospace components
	<ul> <li>Responsible for providing guidance and supervision to interns.</li> </ul>
	Skills: CATIA, SolidWorks, Python, OpenFOAM, ANSYS
2022/04 - 2022/12	Volunteer and Member of Students' Committee
Lalitpur, Nepal	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.
	<ul> <li>Actively participated as a conference volunteer, facilitating session logistics, coordinating with presenters, and overseeing conference sessions.</li> </ul>
2020	Volunteer
Lalipur, Nepal	MechTRIX (National Mechanical and Aerospace Engineering Expo)
	<ul> <li>Assisted the organizing committee in successfully organizing a water rocket competition for secondary-level students</li> </ul>

### Skills

CAD/Analysis CATIA, SolidWorks, OpenFOAM, ANSYS	Programming C, Python
Miscellaneous Linux, LATEX (Overleaf), Microsoft Office, Adobe Creative Cloud	<b>Soft Skills</b> Time Management, Teamwork, Problem-solving, Documentation
Languages	
Nepali Nativa Profision av	English Professional Profesionary
Native Proficiency  Declaration	Professional Proficiency

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

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 1 6 AUG 2023

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CT452	Computer Programming	20	08	100	8	32 4	40 18	64	82										-	_
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ME451	Engineering Drawing II (Practical)	09	40	100	24	16 4	40			57	28	82				_	_	_		
ME452	Fundamental of Thermodynamics & Heat Transfer	20	80	100	∞	32 4	40 11	49	09	_							L	_		-
ME452	Fundamental of Thermodynamics & Heat Transfer (Practical)	25	•	25	10	-	10 20	-	20									_		H
SH451	Engineering Mathematics II	20	80	100	8	32 4	40 20	33	53								_	_	_	-
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SH453	Engineering Chemistry (Practical)	20	30	20	∞	12 20	81 0	27	45											_
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ASS01 Fundamentals of Aerospace Engineering	20	80	100	œ	32 4	40	14	54 68				-	-		-	-	-
ASS02 Fluid Dynamics	20	80	100	<b>æ</b>	32 4	40	14	49 63				-	$\vdash$		-	+	-
ASS02 Fluid Dynamics (Practical)	25	,	25	10	-	10 2	21	- 21				-	-		H	-	-
ASS03 Computer Aided Design & Manufacturing	20	80	100	80	32 4	40	91	82 99					-		-	-	-
ASS03 Computer Aided Design & Manufacturing (Practical)	25	1	25	01	-	10 2	21	- 21					-		-	-	-
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ASSS1 Aerospace Materials	20	80	100	∞	32 4	40 20		46 66							H	_	_
ASSS1 Aerospace Materials (Practical)	25	,	25	10	-	10 16		- 16					_		-	L	-
ASSS2 Aerodynamics	20	80	100	8	32 4	40	18 6	82 09						11	-	-	-
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ASSS3 Applied Thermodynamics & Heat Transfer	20	08	100	80	32 4	40 17	- 12	47 64								_	
ASS53 Applied Thermodynamics & Heat Transfer (Practical)	25	,	25	10	-	10 24		- 24					-		H	-	-
MESS2 Strength of Materials	20	80	100	8	32 4	40 17		40 57					-		-	-	-
MESS2 Strength of Materials (Practical)	25	,	25	10	-	10 23	3	- 23					-		-	-	-
MESS6 Theory of Mechanism & Machine I	20	80	100	8	32 4	40 1	18 4	42 60							$\vdash$	-	-
SH552 Probability & Statistics	20	08	100	80	32 4	40 2	20 5	54 74					-		$\vdash$	-	$\vdash$
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AS601	Avionics		20	80 1	100	32	40	12	44	99						-				-	-
AS601	Avionics (Practical)		25	,	25 10		10	25	,	25						-	-		-		-
AS602	Machine Design		20	80	100	32	40	11	25	69						-		-			-
AS602	Machine Design (Practical)		25	,	25 10	- 0	10	23	1	23								-		+	-
AS603	Continuum Mechanics		20	80	100 8	32	40	19	99	84								_	-	-	+
AS603	Continuum Mechanics (Practical)		25	,	25 10	- 0	10	24	,	24						-			-	-	-
AS604	Aircraft Propulsion		20	80	100 8	32	40	20	20	70									-	-	-
AS604	Aircraft Propulsion (Practical)		25		25 10	- 0	10	22	٠	77								-		-	-
AS605	Fault Monitoring and Diagnosis		20	80	100 8	32	40	18	9	83							-			-	-
AS605	Fault Monitoring and Diagnosis (Practical)		25	,	25 10	- 0	10	22	•	22							-	_		-	+
SH603	Numerical Methods		20	80	100 8	32	40	20	44	64						-	-	-	-	_	
SH603	Numerical Methods (Practical)		20		50 20	-	20	20	ı	20						-		-	-	_	-
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AS651	Aircraft Manufacturing Process		20	80	100	32	40	16	69	82					_	-				+	$\dashv$
AS651	Aircraft Manufacturing Process (Practical)		90		50 20	- 0	20	-	1	48								-		+	+
AS652	Aircraft Maintenance Engineering		20	80	100 8	32	-	19	48	19									-	-	
AS652	Aircraft Maintenance Engineering (Practical)	cal)	20	ı	50 20	- 0	20	34		34								_		-	
AS653	Aircraft Systems		20	80	100	32	2 40	10	29	69						-	-		-	-	
AS653	Aircraft Systems (Practical)		25		25 1	10	10	17		17								_	-		
AS654	Flight Dynamics		20	08	100	8 32	2 40	17	51	89							_		-		-
AS654	Flight Dynamics (Practical)		25		25 1	10	10	11	•	17			2					-	-		-
AS655	Unmanned Air Vehicle Synthesis		20	08	100	8 32	7 40	11	89	85								-			
AS655	Unmanned Air Vehicle Synthesis (Practical)	0	25		25 1	10 -	9	24	ı	24											
ME656	Finite Element Method	300	20	80	100	8 32	2 40	16	20	99							-		-		
ME656	Finite Element Method (Practical)		25	•	25 1	10	. 10	21	,	21					_		-				_
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AS701	Aircraft Preliminary Design	20	80	100	8 3	32 40	17	17	88				+	-	_					T
AS701	Aircraft Preliminary Design (Practical)	25		25 1	10	- 10	0 19	,	19				+	-	_				T	T
AS702	Computational Fluid Dynamics	20	80	100	8	32 40	17	19	84			T	-	$\vdash$	-					T
AS702	Computational Fluid Dynamics (Practical)	25		25 1	10	- 10	1 23	,	23				$\vdash$	-	-	L			T	T
AS703	Human Factors in Aviation	20	80	100	8	32 40	18	19	85				-	-	-			T	T	T
AS703	Human Factors in Aviation (Practical)	25		25 1	10	- 10	7 74		24					-	L			+		T
AS704	Aircraft Structures	20	80	100	8	32 40	17	19	78			T		_				+	T	T
AS704	Aircraft Structures (Practical)	25		25 1	10	- 10	24		24				-					+	-	T
AS705	Instrumentation & Sensors	20	80	100	8 32	2 40	19	69	88			-	-	-				-	+	Τ
VS705	Instrumentation & Sensors (Practical)	25		25 1	10	10	23		23				$\vdash$	_				t	t	T
AS707	Project I (Practical)	20	1	50 2	20 -	. 20	47		47				-	-				+	-	T
AS72501	Compressible Aerodynamics (Elective I)	20	80	100	8 32	2 40	17	89	82				-	L				-		Γ
AS72501	Compressible Aerodynamics (Elective I) (Practical)	25		25 1	10	10	24	,	24			H	-	-					T	T
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AS751	Internship (Practical)	100	-	100	40	. 40	94		94										T	T
VS752	Aviation Professional Practices	10	40	50 4	4 16	6 20	6	29	38			r						T	t	T
AS753	Project II (Practical)	20	50 1	100	20 20	0 40	46	46	92										T	T
AS76501	Hypersonics (Elective II)	20	80	100	8 32	2 40	14	29	81				-					T	t	T
AS76501	Hypersonics (Elective II) (Practical)	25	ı	25 1	10	- 10	23	•	23				-	H				T	T	T
AS78501	Advanced Propulsion Systems (Elective III)	20	80	100	8 32	2 40	15	\$4	69									T	T	T
AS78501	Advanced Propulsion Systems (Elective III) (Practical)	25	,	25 1	10	01	74	Ť	24											T
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Based on the weightages assigned to each year scores the aggregate full marks, marks secured and percentage are given below.

Year	-	П	E	<u>I</u>	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



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

Passed Examination of 2079 (2023 First Division 76.28 Passed Division Percentage

Prepared by Menay

Date of Issue

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CONTROLLER OF EXAMINATIONS

# Grading system of marks secured in the examination:

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

- 65% and above in the aggregate.

50% and above in the aggregate

Second Division

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.