Thesis Group list of Students Officers (AE-11)

Group No.	Exam Roll	Name	CGPA	Supervisor	Objectives	Tentative Title of Thesis	Remarks
1	201922001	Flg Offr Sherajul Mamun Mim	3.95	Air Cdre Mahbubul Alam	i. To conceptualize and develop a cost-effective RADAR system. ii. To determine position of a target within a possible range of 100m. iii. To determine the velocity of moving targets using Doppler principle. iv. To develop the map of a terrain using EM wave.	DESIGN AND DEVELOPMENT OF GRAPHICAL USER INTERFACE(GUI) AND SIGNAL PROCESSING SYSTEM FOR A PROTOTYPE RADAR FOR RANGE DETECTION OF MOVING TARGET.	
	201922007	Flg Offr A.K.M Ahadul Haque	2.88				
2	201922005	Flg Offr Nafia Nuzhat	3.9	Gp Capt Zahid	i. To conduct experimental study of different shaped dimple on NACA 4418 aerofoil. ii. To conduct CFD analysis of the same system and compare with experimental result. iii. To calculate (L/D) ratio for different shaped dimples and compare between them to find the best result. iv. To find out the stall angle and compare with plain aerofoil. v. To select the best size and shape of dimple after obtaining the result.	SURFACE MODIFICATION OF NACA 4418 AEROFOIL WITH DIFFERENT SHAPED DIMPLES AND AERODYNAMIC PERFORMANCE ANALYSIS	
	201922011	Flg Offr Md. Arafat Hossain Sifat	2.93				
3	201922002	Flg Offr Shashwata Sarker Dip	4	Gp Capt AL Golani	i.To validate the design and performance calculations of the design group by safely and successfully test-flying the aircraft and recording all the information resulting from the flight test sequence in order to fine tune the design characteristics of the aircraft. ii.To identify deviation between the in-flight data with the theoretical data and subsequently suggesting the corrections to fine tune the design.	FLIGHT TESTING & INSTRUMENTATION OF A FIXED WING UNMANNED AERIAL VEHICLE (UAV) TARGET DRONE	
	201922012	Flg Offr Jim Walid Al- Mamun	3.02				
	201922017	Md. Farhan Masud	2.86				
4	201922008	Flg Offr Syed Ahnaf Ali	3.25	Gp Capt AL Golani	i.Indigenous design of fixed-wing Target Drone equipped with turbojet engine with theoretical knowledge gained. ii.Analyze stability and performance both theoretically as well as using various simulation tools like ANSYS, SolidWorks, and DATCOM. iii.Integration of Autopilot System. iv.Fabricate and Testing of High-Speed Target Drone.	DESIGN AND FABRICATION OF A FIXED WING HIGH-SPEED JET PROPULSION POWERED UNMANNED AERIAL VEHICLE (UAV) TARGET DRONE	
	201922010	Flg Offr Md. Shadman Sakib	2.62				
5	201922004	Flg Offr Saraf Tasnim	3.94	Gp Capt Kathrikeyan	i. Develop a simulated instrumented range for firing ii. Integrate a hardware with a simulated range to compute the firing point and determine accuracy	DEVELOPMENT OF PROOF OF CONCEPT FOR WEAPON FIRING SIMULATOR BASED ON LASER TECHNOLOGY.	
	201922009	Flg Offr Noor-E-Jamila Apshara	3.31				
6	201922003	Flg Offr Sadia Sultana Shela	3.27	Maj Evan	i. To determine the lift and drag co-efficient at different angle of attack. ii. To analyse the flow characteristics for using blowing and suction slot. iii. To analyse and comparing the data for different cases in optimization.	COMPERATIVE STUDY OF BLOWING AND SUCTION SLOT GEOMETRY OPTIMIZATION ON NACA 0015 AND NACA 2412 AIRFOIL.	
	201922006	Flg Offr Samia Binta Faisal	3.61				

Thesis Group list of Civil Students (AE-11)

Group No.	Exam Roll	Name	CGPA	Supervisor	Objectives	Tentative Title of Thesis	Remarks
1	201922020	Tasneem Ishrat Jahan	3.92	Air Cdre Mahbubul Alam	i.To use the RADAR built in a series of field tests. ii.To improve the system capability gradually in data acquisition & signal processing. iii. To enhance the range of detection for moving targets.	DESIGN & DEVELOPMENT OF A PROTOTYPE RADAR SYSTEM FOR SENSING RANGE, DOPPLER, AND SYNTHETIC APERTURE (SAR) IMAGING.	
	201922049	Dewan Shegufta Nahian	3.36				
	201922044	Md Muzahid Hossain	2.84				

#	ID	Name	CGPA	Supervisor	Objectives	Project Title	
2	201922034	Mahima Haque	3.95	Air Cdre Mahbubul Alam	i. To fabricate a composite composed of Natural Fiber/ Glass Fiber, Epoxy Resin and Nanoparticles ii. Test the mechanical properties of the material by carrying out Tensile test, Flexural Test, Impact Test and Hardness Test iii. Test its machinability by carrying out drilling operation. The delamination factor and taper ratio is to be determined as well.	EFFECT OF NANOPARTICLES ON MECHANICAL PROPERTIES, ELECTRICAL PROPERTIES AND MACHINABILITY OF FIBER REINFORCED POLYMER COMPOSITES	
	201922014	K. M. Rafi Uddin Labib	3.32				
	201922045	Md Sajjad Hasan	2.98				
3	201922050	Farhan Syeed	3.6	Prof. M.A. Taher Ali	i. To investigate the characteristics off list and drag profile over a rotating cylinder at low speed and low Reynold's Number. ii. To analyze the velocity profile, vortex shedding, stagnation and separation points, lift to drag coefficient, pressure profile etc of the rotating body at different angles of attack. iii. To establish a relation between experimental and CFD simulation approach by pointing out the possible reasons of deviations.	EXPERIMENTAL STUDY OF FLOW AROUND A ROTATING CYLINDER	
	201922028	Sandra Holy Halder	3.43				
	201922026	Aahnaf Ahmed	3.15				
4	201922029	Nafisa Ibnat Tasfee	3.97	Prof. M.A. Taher Ali	i. To carry out a comparative study between the plane circular jet and swirling jet . ii. To assess the effect of initial condition such as Reynold number and pitch of swirls generator o swirling jet. iii. To study the basic phenomes of swirling jets, over a wide range of swirl number of a moderate valve of Reynolds number. iv. To study the interaction and competition between different instability mechanism and identify the most unstable mode in flow	EXPERIMENTAL STUDY OF FLOW CHARACTERISTICS OF SWIRLING JET	
	201922046	S. M Mehady Hasan	3.25				
	201822045	Md. Soykot Tanvin Rudro	3.13				
5	201922019	Rifah Tamanna Islam	3.74	Prof. M.A. Taher Ali	i. Studying aerodynamic characteristics as well as flow field around NACA 0012 at different AOA. ii. Investigating the the effects of AOA and Reynold's number on the flow field and aerodynamic characteristics. iii. Constructing an open loop wind tunnel with three component balance and understanding its behavior and calibration techniques	STUDY OF LIFT AND DRAG CHARACTERISTICS AND FLOW FIELD AROUND NACA 0012 AIRFOIL	
	201922024	Priyam Iftikhar Tahmid	3.17				
	201922015	Zabir Ibne Zabir	2.8				
6	201922032	Pavel Chowdhury	3.51	Gp Capt Zahid	i. To identify the effects of vortices and the correlation between vorticity and aerodynamic parameters such as lift, drag and lift to drag ratio. ii. To determine the winglet at the most efficient cant angle that will reduce the induced drag and thus the fuel consumption. iii. To understand the contribution of the wing with and without winglet having same surface area.	EXPERIMENTAL AND NUMERICAL ANALYSIS OF NACA AIRFOIL ON AERODYNAMIC PERFORMANCE WITH BLENDED WINGLET AT DIFFERENT CANT ANGLES.	
	201922036	Md. Hasib Mahmud Mazumder	3.49				
	201922022	Md Sadik Shahriar	2.89				
7	201922037	Md. Faysal Mahamud Bayzed	3.51	Gp Capt Zahid	i. To design and fabricate an airfoil with good heat transfer characteristics. ii. To design the honeycomb structure based airfoil and compare with the normal airfoil. iii. To analyze and optimize the airfoil.	FLOW CHARACTERISTICS, HEAT TRANSFER CHARACTERISTICS AND STRUCTURE INTEGRITY OF NACA 4415 AIRFOIL.	
	201922039	Md. Redoanul Islam	3.17				
	201922035	Faiaz Ul Alam	3.12				
8	201922016	Nazmul Hasan Jewel	3.53	Gp Capt AL Golani	i. Use the academically earned theoretical knowledge to check the stability and performance of the designed Fixed Wing Aerial Vehicle. ii. Use of simulation tools such as ANSYS to measure the downwash effectiveness. iii. Use of design tools such as Solidworks for modelling the aircraft. iv. Using Datcom Plus as a performance analysis tool to check the performance of the designed aircraft.	STABILITY & PERFORMANCE ANALYSIS OF A FIXED WING HIGH SPEED JET PROPULSION POWERED TARGET DRONE	
	201922040	Md. Sohanur Rahman Sohan	3.3				
	201922038	Md Naimul Islam Niloy	3.03				
9	201922018	Md. Zamiul Alam	3.61	Gp Capt Kathrikeyan	i. To linearize a nonlinear system. ii. To stabilize an unstable system using multiple controller and compare their effectiveness.	CONSTRUCTION AND MODELLING OF AN INVERTED PENDULUM ON A CART	
	201922048	Shadman Tahmid	3.41				
	201922030	Khalid Mehrab	3.08				
10	201922013	Halima Akther Rabsha	3.6	Gp Capt Kathrikeyan	i. To generate a suitable model for recognizing emotion. ii. To compare suitable algorithm by comparing and analyzing the results. iii. We have to create a SER (Speech Emotion Recognition) system to enhance the accuracy of the model in such situation like whining ,ads for call center, voice based remote helper, chatbots or semantic discovery and so on.	SPEECH EMOTION RECOGNITION IN BENGALI LANGUAGE.	
	201922033	Jannatul Ferdous	3.15				

	201822030	Md. Mohiuddin Shanto	3.07				
11	201922025	Kazi Navid Newaz	3.52	Maj Evan	i.Studying the effect of surface modification on a dynamic characteristic of NACA 2412 ii. Comparing the result of modified surface airfoil with the standard airfoil. iii. Constructing the PIV setup of wind tunnel iv.Comparing the result of CFD with PIV experiment v. Understand the behavior and calibration techniques of wind tunnel.	VISUALIZATION & VERIFICATION OF FLOW DYNAMICS BEHIND AN AIRFOIL WITH CAVITY THROUGH PIV EXPERIMENT AND NUMERICAL SIMULATION	
	201922031	Md. Shahria Neaj Chowdhury Aunkur	3.29				
	201922021	Md. Tamzid Ibne Reja Tur	3.19				
12	201922043	S M Mohaimenul Islam	3.7	Maj Evan	The objective of this investigation is to study the aerodynamic characteristics of a Variable Geometry Raked Wingtip in a tapered wing of NACA 4412. This investigation will be carried out both analytically and experimentally. Hereby, a comparison of the aerodynamic characteristic will be shown in the investigation.	AERODYNAMIC ANALYSIS OF VARIABLE GEOMETRY RAKED WINGTIPS WITH TAPERED WING OF NACA 4412.	
	201922023	Md Foyzul Haque Reza	3.39				
	201922027	Md. Habibur Rahman	2.94				