

AJAY KUMAR GARG ENGINEERING COLLEGE, GHAZIABAD

**25th MEETING OF THE BOARD OF GOVERNORS TO BE HELD ON
28th February 2024 AT 11 A.M. IN THE COLLEGE PREMISES**

DETAILED AGENDA

1. Confirmation of Minutes of Last Meeting of the Board of Governors

Points arising out of last meeting (ATR)

S. No	Item	Action Taken
(a)	It was suggested that due to exponential increase in intake of computer Science related branches, the college needs to recruit more number of quality faculty members in these branches. It was felt that we have to be alive to the market forces and provide competitive remunerations to well qualified, experienced and competent faculty.	<p>The college has made exceptions to the usual norms of salary fixation for deserving candidates.</p> <p>In the past year, the DA has been raised to bolster faculty retention efforts within the college. Additionally, to ensure that we attract and retain the best talent we have implemented and revised various incentive policies which include initiatives such as our patent policy, incentives for publications in journals, support for attending conferences, introduction of best paper awards, and the viewership of video recordings at AKGEC studio. Incentives have also been introduced for overall good performance based on ACRs.</p>
(b)	Established of AKGEC State Private University was discussed in detail. The BoG members were of the opinion that with our experience of last 25 years, we can grow much faster with autonomy and so recommended that the college becomes a State Private University. It was discussed that the college has all the required resources that are	<p>The process had been initiated and the inspection by expert committee has also been done. Subsequent to the clarifications provided during the meeting with the Principal Secretary, Higher Education and also to the Chief Secretary the proposal had been accepted and approved.</p> <p>The case is presently pending with the Minister, Higher Education before its approval by the Cabinet.</p>

	required to become a Private University should only be started from session 2024-25 as some pre-requisite planning needs to be made before offering courses.	
(c)	The Director General mentioned that the open air amphitheatre could be used only during good weather for student events and informal college functions. There was an urgent need to construct an auditorium with a capacity of about 800-1000 so that all college events. Including annual convocation could be comfortably held in it. The Board approved the proposal.	The college does not have a suitably large plot of land at present. Efforts are on to procure and locate a suitable place.
(d)	The Director General brought out that the U.P. Government is proposing to establish four Centres of Excellence in various technologies to promote startups and entrepreneurial activities. The scheme envisaged an outlay of Rs.10 Cr. The rest Rs 10 Cr was to be put in by the institution and / or through support from some industries over the next five years. The Director General said that it would be a good opportunity for us to have this CoE to augment our existing facilities of AKG Skill Foundation and Common Facility Centre. The Board approved the proposal to apply for a CoE in Additive Manufacturing.	The project proposal had been prepared and presented to the Principal Secretary, Ministry of Electronics and IT. It is presently pending approval by the Cabinet.

<p>(e)</p>	<p>The Board also considered following requirements and approved the same:</p> <ul style="list-style-type: none"> (i) Air conditioning of all classrooms. (ii) Starting NCC unit. (iii) Starting a DGCA approved Drone Club. 	<ul style="list-style-type: none"> (i) Quotations have been received from three companies and negotiations are under progress. (ii) We were allotted 79 SD/SW cadets (boys and girls) for NCC training under the Fully Self Financing Scheme (FSFS), affiliated with 37 UPBn NCC in Kavi Nagar, Ghaziabad. This allocation spans three years, with 27 vacancies released for our inaugural year. Our students are currently undergoing NCC training with a retired NCC JCO twice a week. Additionally, two faculty members holding NCC C certificates have been appointed as Boys Cadet Administrators. After participating in a centralized NCC camp in April/May/June 2024, additional vacancies will be allocated, allowing us to reach full strength by 2025. (iii) AKGEC is actively developing its Drone Academy to operate as an approved Remote Pilot Training Organization (RPTO) by the DGCA. Procurement of essential infrastructure, including drones and flight simulators, is underway, with construction of a dedicated maintenance room near the Drone Flying Field nearing completion. Additionally, plans for in-house RPA development and faculty training are in progress. Application submission to the DGCA is imminent, with operations expected to commence by August 2024.
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COLLEGE PROGRESS REPORT

a) **Admissions**

Details of students admitted in different courses / branches during the academic year 2023-24 and spectrum of students taken through UPTAC counseling along with comparison of previous years are placed at **Appendix 'A', 'A-1' and 'B'** respectively.

The spectrum of admission through UPTAC is reasonably good; however, due to delayed counseling, the opening ranks of the branches, except CSE, declined. The college was still amongst the first few self-financed colleges to fill up its seats and our position with respect to other few colleges has improved. It was seen with satisfaction that some of our seats got filled even when the vacancies existed in government colleges indicating an increasing preference for our college. Comparative data of admissions in some good colleges is placed at **Appendix 'B-1'**. Under the direct admissions, 32% students had a PCM above 90%, 66% students had a PCM above 80%, 83% students had a PCM above 70% and only 13% students had PCM below 70%. The comparative data of Direct Admissions of last three years is attached at **Appendix 'C'**.

b) **Results**

The result of students graduating during the academic year 2022-23 has been reasonably good. The results for the academic year 2022-23 are placed at **Appendix 'D' to 'F'**. In B. Tech, 88% students have passed, out of which 99% passed with 1st division including 49% with Distinction and 4% honors.

In addition to overall good results, the college had a good achievement in terms of number of students in university merit lists. This year (2023) the college had 14 students in the top 10 merit lists of AKTU with 1 Gold, 1 silver and 1 bronze medal. The list is attached at **Appendix 'G'**. The college has been consistently having the large number of students in merit lists and number of medalists over the last few years (**Appendix G1 and G2**).

c) **Campus Placements:**

Campus placements have been maintained both in terms of number and class of companies. For 2023 pass-out batch, the college had a total of 1652 job offers and 894 exclusive job offers.

Also, 09 students opted for higher studies (M.Tech / MBA). The comparative placement data of the last three years and further details for 2022-23 are placed at **Appendix 'H'**. The table also indicates major companies that visited the campus. The overall placement has been 75% with an average salary of Rs. 4.83 lacs with highest salary of Rs.33.80 LPA by C2 FO, to a student from CSE branch.

d) **Higher Studies – M.Tech / MS / MBA**

In addition to good placements for 2023 pass-out batch, 11 of our students qualified for GATE / CAT exam and have opted for higher studies (M.Tech / MBA). 03 students of 2023 pass-out batch have got selected in reputed institutes like MNIT, Allahabad, Delhi Technological University, NIT Kurukshetra pursuing Higher Studies and the process is still continuing.

e) **Personality Development Programme**

In the past, the Personality Development Program (PDP) was exclusively organized for second-year students. However, in the current session (2023-24), we have introduced a Boot Camp for final-year students of the 2024 passing out batch, and PDP is now mandatory for both second and third-year students. Additionally, we have partnered with three companies under CSR schemes to enhance the employability skills of our students across all years:

1. CSR Box for IBM Certification Courses
2. Subnet Foundation for MICROSOFT Tech Saksham for technical skills enhancement
3. Centum Learning Foundation for CAPGEMINI and ACCENTURE Employability & Skills Enhancement. Moreover, we have initiated the Innovation Fellowship Program with Stanford University and the Google Developer Program.

f) **Students Amenities**

All existing sports and recreational facilities in the college hostels are well maintained and extensively used. The management of all the hostel libraries (boys & girls) is being managed by the students and its usage has been increasing. Presently, the college has 6 hostels with 3 for boys and 3 for girls. The total capacity of all the hostels is 1588 seats with 923 boys and 665 girls. Presently 878 boys and 563 girls are residing in the campus hostels. Besides, this, 36 boys seats and 50 girls seats are reserved for DDUGKY students.

Also existing dormitories and 18 rooms of boys hostel-3 are being provisioned with Bunk beds thus creating facilities for 156 boys of DDUGKY students and also one hall in girls hostel GH-3 is being converted in to dormitory for 32 girls of DDUGKY students.

2.1) **FACULTY / STAFF AFFAIRS**

a) **Recruitments**

The college has made persistent efforts to recruit faculty through well-constituted selection committees so as to meet the norms laid down by AICTE. Since last BOG meeting, the college has recruited 58 faculty members and 27 staff members in different departments. The lists of faculty and staff appointed are placed at **Appendix 'I-1'** and **'I-2'** respectively. The present department-wise faculty positions are placed at **Appendix 'I-3'**. Other than these faculty and staff, the college has 13 adjunct faculty members. The list of the same is attached at **Appendix J**.

b) **Faculty Development**

Seminars / Workshops / Short Term Training Programmes

College encourages the faculty for participation in conferences and seminars with a view to facilitate individual growth and academic excellence in the college. During the academic session 2022-23, faculty members have attended a number of seminars, workshops and training programmes. A list of faculty members who were deputed to attend seminars/ workshops /short-term courses during the period is attached as

Appendix 'K'. The faculty members and students are also encouraged to attend and present their research articles in reputed conferences and they are financially supported for attending the same.

c) **Paper Presentations**

Faculty members are encouraged to share their research findings by publishing in reputed international journals, conferences, and book chapters. In the academic year 2021-22, 49 research papers were indexed in SCI/SCIE/ESCI databases, 44 papers were published in Scopus journals, 88 papers were published in Scopus-indexed conferences and 19 books / book chapters were published. In 2022-23 a significant progress in R&D was witnessed, with 256 publications, including 130 SCI/SCIE/ESCI/Scopus papers, 105 papers in Scopus conferences, and 21 books / book chapters. Now the faculty members have started prioritizing recognized journals and conferences. In the ongoing academic year 2023-24, until December 2023, 27 SCI/SCIE/ESCI/Scopus journal publications, 36 Scopus conference papers, and 7 books / book chapters have been recorded. Journal publication details are placed at **Appendix 'L'** and Conference publication details are placed at **Appendix 'M'**.

d) **Book / Books Chapters Publications**

Including session 2022-23, till date **28** books/Book Chapters have been written and published by our faculty members. A list of faculty members whose books have been published during last three years is placed at **Appendix 'N'**.

e) **Higher Studies (Ph.D)**

Faculty members are being encouraged to enhance their academic qualifications. At present **82** faculty members of the college are pursuing Ph.D. A list of faculty members pursuing higher studies is placed at **Appendix 'O'**.

f) **Performance based Incentive**

To encourage excellence in teaching, the college had instituted performance based incentive ranging from Rs. 10000/- to Rs. 20,000/- to faculty members who have got exceptional results with good class averages in external exams. A total of 30 faculty members were given awards amounting to Rs 3,00,000/- for exceptional results during the academic year 2022-23. The list of faculty members awarded during odd and even semester are placed at **Appendix 'P'** and '**P1**'. Along with the performance based incentives, the incentives for publication of papers in refereed journals were also given to 30 faculty members and students, amounting to Rs. 3,00,000/- with details mentioned in **Appendix 'P2'**. The faculty members are also incentivized for maximum viewed video lectures on you tube. The details of the same are included in **Appendix 'P3'** which enlists 41 faculty members who received a total of Rs. 205000 incentives. In addition, the college also provided the ACR based incentives amounting to Rs. 1441916/- to 37 best performing faculty members since January 2023 till date. The details are appended as **Appendix 'P-4'**.

g) **Promotions**

Since July 2023, 12 faculty members have been promoted / upgraded. The details are attached as **Appendix 'Q'**.

2.2 **PROGRESS ON OTHER CENTRES / PROGRAMMES BEING RUN IN THE COLLEGE**

a) **TIFAC CORE / AKG Skills Foundation**

AKGEC places special emphasis on collaboration with industries at various levels to groom the students to meet industry standards. These include establishing collaborative facilities for student training in emerging multi-disciplinary technologies and undertaking industry-sponsored consultancy projects. The college has the distinction of being the only Engineering College in the State of U.P. to have received approval from the Department of Science and Technology (DST), Government of India, for the establishment of the Centre of Relevance and Excellence (CORE) in the field of Automation & Robotics.

CORE envisages a unique partnership between AKGEC and various International Industries, further supported by the National Skill Development Corporation, Ministry of Skill Development and Entrepreneurship, and Government of India to promote research, consultancy, project development and training in the emerging technological fields of Automation, Robotics, Manufacturing, Fabrication and Automotive Technology

Ten Centers of Excellence (COEs) have thus been established under the above initiative which is equipped with state-of-the-art training, prototyping, testing and measurement facilities in the field of Automation, Robotics, Manufacturing & Automotive domain including CNC / Robotic Machining, Manual / Robotic Welding, Thermal/ Plasma / Laser Cutting, Destructive / Non-Destructive Testing, Measurement / Metrology, Industrial Pneumatic / Hydraulics / PLC's / Drives, Mechatronics, 3D Printing etc.

These facilities are operational with active support from eminent Industry partners including SIEMENS, BOSCH Rexroth, National Instruments, KUKA Robotics, Mitsubishi Electric, Fronius, Schmalz, CARL Zeiss, Messer Cutting, IPG Photonics, Peppri+Fuchs& Bosch Ltd. to meet the growing industry requirement of highly skilled manpower

(i) **Training & Consultancy**

The COEs offer training courses for Undergraduate / Postgraduate / Diploma / ITI / X / XII pass students and working professionals at par with global didactic concepts, in line with National Occupational Standards (NOS) and Qualification Packs (QP). Its objective is to conduct Skill development training through industry-institution collaboration to empower youths under certification by nationally and internationally recognized Industries/Societies/ Industry Associations/ Sector Skill Councils etc. The COEs have trained more than 3000 candidates to date, including corporate professionals from Indian Railways (Railway Workshops, Modern Coach Factory, Indian Railways Institute for Mechanical and Electrical Engineering, Jamalpur etc.) Indigo Airlines, IIT Delhi, Honda R&D, Jindal Stainless, Jaquar, KUKA, Tata Automation Ltd., Force Motors, APEX Auto Ltd., Tata Technologies, Kirby Building Systems, TVS Motors, Jebronics India Pvt. Ltd., Ashok Leyland, Adverb

Technologies, Tokai Engineering Pvt. Ltd., Ford India Pvt. Ltd., Honda Cars India Pvt. Ltd., Peppri and Fuchs, EDAG Engineering & Design, Saint Gobain Glass India, Schneider Electric, Marshall CNC, Sixth Sense Robotics, Sriram Pistons etc.

All the COEs are equipped with the latest tools and technology to promote modern manufacturing practices among engineers and industries at large. These centers not only provide industry-relevant training to participants but also offer consultancy and Industrial Services. Some of the major consultancy projects/services undertaken during the last academic year at CORE are given below:

- Fabrication of Battery Connection Plate
- Fabrication of Bearing Plate for Side Bearer
- Fabrication of Ferrule
- Fabrication of Fire Extinguisher Trolley
- Fabrication of Mounting Plate for Gravity Tap
- Fabrication of Rail Guard
- Fabrication of Rectangular Frame
- Fabrication of Chassis - Facility Utilization Charges
- GTAW & SMAW Butt Welding
- Repair Work of Stainless-steel Tank
- Fabrication of Base Frame of Vehicle
- Fabrication of Boom Barrier
- 3D Printing parts of the intake manifold
- Epilog Laser engraving on brass ring
- Polyjet 3D Printing of 22 parts on Stratasys J55 Printer
- Development of HOD value test bench
- Latent heat thermal energy storage heat exchanger of an acrylic sheet
- 3D printing of EV Battery box
- 3D printing of SAE Supra vehicle parts fixture
- UGV Camera Part
- 3D Printing of manifold assembly
- 3D printing of Blower Fan

(ii) **AICTE IDEA Lab**

AICTE decided to establish the IDEA (Idea Development, Evaluation & Application) Lab in AICTE-approved institutions, encouraging students to application of science, technology engineering and mathematics (STEM) fundamentals towards enhanced hands-on experience, learning by doing and even product visualization. AKGEC- Fab Lab was selected as one of the mentor labs for all the Idea Labs being established in the country. It has been given the responsibility of training the mentors, faculty & trainers of various Idea Labs in advanced technologies such as Embedded Electronics, Laser Cutting Systems, CNC Router Systems, PCB designing, Fabrication and Prototyping with various IDEA lab tools. To continue with this endeavor AKGEC has conducted four Basic and Advance Idea Lab FDP on Smart Manufacturing where participants from all over India participated.

(iii) **IDEA Lab FDP on Design Thinking (22-30 May 2023)**

The FDP was participated by eminent academicians, engaged with existing AICTE approved IDEA Labs, came from all over the country, from nine different states and union territories of the country, including Uttar Pradesh, Haryana, Tripura, Puducherry, New Delhi, Tamil Nadu, Chhattisgarh, Karnataka and Madhya Pradesh. Six teams, focusing on various domains, followed the Design Thinking process—Empathize, Define, Ideate, Prototype, and Test. Each team visited relevant industries, engaged with experts, and used digital manufacturing tools to create prototypes. A competent jury evaluated the prototypes, marking the culmination of a program where teams remained immersed in design thinking to address challenges since its inception.

(iv) **Innovation Boot Camp (3-10 April 2023)**

Innovation is a vital component and development in today's rapidly evolving world. Recognizing the importance of fostering innovative thinking among students, an Innovation Boot Camp was conducted at AKGEC FAB LAB for KGDS, Saraswati Vidya Mandir School, Rajnagar students. Participants were encouraged to form teams at the beginning of the boot camp, at team-building activities

bond and collaborate more effectively during the program. The boot camp included hands-on workshops that allowed students to explore various innovative technologies and tools. These workshops covered topics such as 3D printing, coding, Laser cutting & engraving, enabling participants to acquire practical skills and apply them creatively. Using these technologies, a project named Candy Dispenser was developed.

(v) **10x Focus (25-26 April 2023)**

The '10X Focus' workshop was conducted to help students master concentration, deepen their understanding, improve their application skills, and enhance their ability to generate new ideas while reading, listening, thinking, speaking, and writing. The workshop was attended by 100 students who provided positive feedback and gave a rating of 4.5 plus out of 5. The workshop aimed to help students elevate their experience on 7 outcomes, which included deeper concentration, finding more interest in the content, much better speed for understanding, deeper understanding, application, and creating new connections / knowledge / possibilities.

(vi) **FDP on Industrial ROBOTICS (28 March - 3 April 2023)**

The AKGEC-KUKA Industrial Robotics Training Center organized a five-day Faculty Development Program (FDP) for educators from various departments at AKGEC. The program aimed to educate faculty members on fundamental concepts related to robot classification, safety in industrial robotics, as well as the operation and programming of these systems. A total of 13 faculty members from diverse engineering departments, including Civil Engineering, Electrical Engineering, Electronics and Communication Engineering, Mechanical Engineering, Information Technology, and Computer Science Engineering, actively participated in this FDP.

(vii) **TOT- School of Specialized Excellence (SoSE) (24 Apr - 1 May 2023)**

In partnership with the Automotive Skills Development Council (ASDC), the AKGEC Skills Foundation conducted a Training of

Trainer (TOT) program for Specialized Resource Persons (SRPs) from Delhi, Schools Government. These SRPs play a crucial role in training Grade 9 students at the School of Applied Learning (SoAL) and Grade 11 students at the School of Specialized Excellence (SoSE) in the fields of Mechatronics and Electrical domains.

(viii) **KUKA TIER-1 WORKSHOP for APeC (4th – 6th July 2023)**

AKGEC in collaboration with KUKA, a global leader in intelligent automation solutions, had hosted an exclusive International Automotive/Tier-1 Workshop and KUKA India Meet from 4 July to 8 July 2023 at AKGEC-KUKA Industrial Robotics Training Center at Ajay Kumar Garg Engineering College (AKGEC) Campus Ghaziabad. This workshop brought together industry experts and key stakeholders from various KUKA subsidiaries of the Asia Pacific Region like South Korea, Vietnam, Thailand, Malaysia, Indonesia and also from Germany. During this workshop, participants were acquainted with various Robotics Applications used by Global Automotive Manufacturers for achieving high-end product quality and high work efficiency. The participants had hands-on practice sessions at Advance Robotic Training Facility at AKGEC. The opening session of the workshop was attended by prominent dignitaries including Mr. Alan Fam, Managing Director KUKA APeC Region and Chief Regional Officer, Dr. R.K Agarwal, Director-General of AKGEC, Mr. Abhijeet Nehra, Managing Director of KUKA India, Mr. Vikas Swami, Vice President. KUKA APeC and Prof. Ashiv Shah, COO, AKGEC Skills Foundation.

(ix) **2nd Mitsubishi ATC (24-25 March 2023)**

The 2nd ATC Meet took place at AKGEC-AIA, with all eight ATCs, including AKGEC, participating in the event. The primary goal of this meeting was to discuss the roadmap for the ATC schedule in the financial year 2022-2023 and explore future collaborations between ATC and MEI. A total of 40 participants attended the ATC, representing various institutions such as IITCA Kolkata, CVR College of Engineering, Nirma University Gujarat, Sri Eshwar College, MIET

Jammu, MRIIRS Faridabad, Mitsubishi Electric, and AKGEC Ghaziabad.

(x) **Training for the Class XI Students from School of Specialized Excellence (SoSE)-Delhi Board of School Education (01/5/2023-05/5/2023)**

Training for the Class XI students was conducted for 20 hrs. in various domains from the School of Specialized Excellence (SoSE)-Delhi Board of School education at AKGEC-KUKA IRTC & AKGEC-BOSCH CEAT. This internship was proposed by ASDC and M/s Lend A Hand.

A total of 35 Trainees including 31 Students and four faculty members completed their training in Automation at CEAT and Mechatronics (Robotics domain) at IRTC.

(xi) **Internship- School of Specialized Excellence (SoSE)-Delhi Board of School Education (29/5/2023-16/6/2023)**

Internship of Class XI students was conducted for 80 hrs in various domains from School of Specialized Excellence (SoSE)-Delhi Board of School education at AKGEC-KUKA IRTC & AKGEC-BOSCH CEAT. This internship was proposed by ASDC and M/s Lend A Hand.

A total of 5 students attended and completed one project which included the design & fabrication of a Robotic Pneumatic Gripper Finger.

(xii) **FDP on Welding Technologies (27-31 Aug 2022)**

AWTRC organized a Faculty Development Program spanning five days, commencing on August 27, 2022, and concluding on August 31, 2022. The event witnessed the active participation of 11 individuals from AKGEC. During this comprehensive program, attendees engaged in diverse sessions aimed at enhancing their academic and professional skills. The sessions covered various facets of faculty development, fostering a conducive environment for

knowledge exchange and skill enrichment. The participants from AKGEC actively contributed to and benefited from this collaborative learning experience, further enriching their academic endeavors.

(xiii) **Corporate Training for Windmoller & Holscher (5-30 Sept'22)**

AKGEC SIEMENS - Centre of Excellence for Training and Research in Automation Technologies/Industrial Automation (TRIA) organized a 20-day training program on Basic Electrical Hand Skill Training, commencing on September 5, 2022. The program saw the participation of three engineers from Windmoller & Holscher.

(xiv) **Advance Workshop Embedded System & IoT (6-8 September '2022)**

A three-day Advanced Workshop on "Embedded Systems and IoT" took place at PIET in Panipat, Haryana, spanning from September 6, 2022, to September 8, 2022. The workshop saw the enthusiastic participation of 30 individuals, including faculty, staff, and students. This immersive event delved into the intricacies of Embedded Systems and the Internet of Things (IoT), providing a platform for hands-on learning and collaborative exploration. The event not only facilitated the exchange of insights but also promoted a holistic learning experience for all attendees.

(xv) **National Skill Competition (23-24 Nov'2022)**

AWTRC organized the National Skill Competition for the most skilled welders in 2022, held on November 23-24, 2022, at AKGEC-Fronius AWTRC. This event aimed to showcase and celebrate the exceptional talents of welders across the nation. Additionally, AWTRC hosted the National Best Welder Competition exclusively for women on the same dates and at the same venue. Both competitions provided a platform for welders to demonstrate their expertise and compete at a national level, contributing to the recognition and advancement of welding skills. The AKGEC-Fronius AWTRC venue served as a hub for these competitions, fostering an environment of excellence and camaraderie within the welding community.

(xvi) **Digital Studio**

AKGEC in its endeavour to promote quality of education and online learning has established a Digital Studio having a high-end video & audio recording facility with the latest state-of-the-art hardware and software to facilitate lecture recording, live streaming of various events, and interviews.

To facilitate easy access to online digital content by students and the academic fraternity and to use it as a repository of Digital content generated through the studio, a YouTube channel was created in the name of 'AKGEC DIGITAL SCHOOL' on the 8th of July 2020.

This AKGEC Digital School has 2000+ recorded & uploaded lectures on various subjects of different engineering streams, covering a watch time of around 27000 hours, which were duly appreciated and adored by the viewers. This channel at present is viewed by almost 236,000+ viewers and with around 2600+ subscribers. Details are placed as **Appendix 'R' & R1**.

b) **Software Development Centre**

Software Development Centre (SDC) is the research and development centre established within the portal of Ajay Kumar Garg Engineering College and set a foothold in the areas of software development, web-based enterprise solutions, mobile development, web application and website development. SDC focuses on high integrity and commitment, quality and rigor at every stage of work, passion for excellence and focus on customer satisfaction. It is an equal-opportunity organization that motivates every member to work with passion and commitment.

SDC is equipped with state-of-the-art infrastructure & hardware/software tools. This provides a highly conducive & stimulating environment for the young brains to explore & come out with innovative solutions using emerging technologies. The Centre conducts training programmes on the latest software technologies which is instrumental in keeping our students technologically ahead of others. The team members of SDC-SI have

delivered many automated systems to Industrial clients as well as to AKGEC which have automated their work processes.

During session 2022-23, SDC has successfully delivered automation solutions to external as well as in-house clients. The centre also disseminates learning by conducting workshops on latest technologies for the college students on weekends or during evening hours. The various tasks done by SDC are:

- (i) FDP Panel VE Cell: A Registration web portal for VE Cell where faculty can redeem incentives for attending workshops and register their FDPs.
- (ii) Table Tennis Tournament Website: A registration website for the Table Tennis Tournament conducted at AKGEC in 2022.
- (iii) SPC Soap Website: An e-commerce website for the Sustainable Production Center (SPC), AKGEC. Lists and allows you to buy organic soaps produced by the centre.
- (iv) CSE Conference Website: A registration and portfolio website for CSE conference 2024.
- (v) Scrolls: A national level technical paper submission platform to register and submit your papers on various flourishing sectors.
- (vi) IGRS grievances tracker: A website to solve the hectic process of grievances tracking by syncing data via IGRS portal
- (vii) Samriddhi Prawah: A project to manage the donation of items among the students of our college in an organized way.
- (viii) AKGEC Digital School: An app to introduce Digital School to the students in the college with video lectures of college faculty.
- (ix) College Website with over 200+ web pages.
- (x) Registrar Office Software Module: to upload I Year student data from Attendance Portal
- (xi) Quiz Portal: an online examination portal for T&P

In addition, SDC conducted workshops, training programs and competitions with the aim to updated students on latest technologies.

RUNTYM (21 April 2023- 24 April 2023): SDC-SI organized a 4-day workshop called "Runtym" for first-year students, focusing on Competitive Programming. The workshop was followed by a coding contest to refine their skills. The concepts were taught by 3rd-year members. The workshop helped in enhancing the students' algorithmic thinking and problem-solving abilities.

a. 150+ students attended the workshop

b. The winners of the coding contest were awarded with cash prizes worth Rs. 3000

PARADIGM-SNU (28 January 2023-29 January 2023): SDC-SI second-year members (Suhail Ahmad ,Vaidic Dodwani , Ayush Raghuwanshi , Dhruv Goyal) participated in a National Level Hackathon-Paradigm organized by Shiv Nadar University, Greater Noida and became the first runner up for the required problem statement. The team created the B2C international shipment management application "Global Dispatch" using Flutter and Django. The app not only streamlines the shipment process but also integrates an ML model to predict shipment prices, making it a game-changer in the industry.

NIT Jalandhar HackMol4.0 (26 February 2023): SDC-SI third year members- Sandeep Gupta and Suyash Singh, participated in a National Level Hackathon- HackMol 4.0 organised by NIT Jalandhar. The team created a fitness app MoreFit using Kotlin and Django and became the first runner up in the hackathon.

Web Wars (19 March 2023): SDC-SI second year members- Alan Ansari and Archas Srivastava, participated in an online JavaScript based hackathon on unstop organized by NIT Trichy. They created a website within a time span of 3 hours and became the first runner up in the hackathon.

c) **Research and Industrial Consultancy Centre (RICC):**

Re-design and development of patented 3D printer to meet market requirements is completed and the design patent filled for the optimized and unique design of 3D printer.

For commercialization, fabrication of eight 3D printers along with training manual is in progress.

Design and development of Bio 3D printer in collaboration with Council of Scientific and Industrial Research- Central Drug Research Institute (CSIR-CDRI), Lucknow is in progress and the following two research papers on Bio 3D printing have been accepted in SCI and SCOPUS indexed international Symposium on Fusion of Science and Technology.

- (i) A comprehensive Review of Bio-3D printing Materials
- (ii) 3D Printing techniques for bio materials.

Design and Development of “Metal 3D Printer” project Sponsored under **Visvesvaraya Research Promotion Scheme (VRPS)** for funding of Rs. 5 Lac from AKTU, Lucknow is completed and a patent application for the same is in progress.

d) **AKGEC International Journal of Technology & Departmental Journals**

A Technical journal launched by the college thirteen years ago is being published successfully. Response of technical community to the journal is overwhelming and we receive stream of technical articles authored by faculty from Engineering colleges located across the country. International number assigned to our journal is ISSN 0975-9514. As on date, twenty-seven issues have been published and distributed to select colleges and universities in India. The journal encompasses all engineering branches within its scope.

To recognize the invaluable intellectual contribution made by professionals in advancing the noble cause of dissemination of scientific and engineering knowledge, all published articles in the AKGEC International Journal of Technology, from volume 7 onwards, were suitably rewarded.

e) **Value Education Cell:**

The Value Education (VE) Cell has continuously been engaged in helping faculty members, staff, and students by conducting various UHV courses, workshops, and events. For recognizing commitment towards Value Education efforts, Dr. APJ Abdul Kalam Technical University (AKTU) has nominated five Regional Nodal Centres across all affiliated colleges, and AKGEC has been designated as one of these centres. The VE Cell aims at personal transformation with the aim of the evolution of human society. The cell has organized various workshops on Human Values for its faculty, staff and students and for participants from other colleges. A number of events

have been organized and coordinated by the VE Cell during 2022-23. More than 200 faculty members, technical/non-technical staff, and more than 500 students participated / attended these events. The details are placed at **Appendix `S`**.

2.3 **SOCIAL ACTIVITIES**

All individuals and organizations have a social responsibility. The objective of the college is to produce not just competent professionals but also responsible citizens of the society. The college emphasizes good moral values, ethics, self discipline and consciousness towards ones civic and social responsibilities. Since these qualities are transformational in nature and cannot be passed through instructions, the college organizes many socially relevant programmes and activities. The objective of these is, firstly for the college itself to meet its social responsibility and secondly to bring about the transformation in the students through observation and participation in these activities of social relevance.

a) **Fee Subsidy:**

It is intimated that under the fee subsidy scheme Rs. 200/= per month per child is being given to class IV employees for their school going children.

During the year 2022-23 fee subsidy was given to 59 children. A total amount of Rs. 1,19,000/= was given to class IV employees to support education of their children. The college also gives full fee waiver to children of its employees for undergoing training programs at any of its COEs.

b) **Adarsh Vikas Kendra:**

The Ajay Kumar Garg Engineering College has a primary school named "Adarsh Vikas Kendra." This school is established to provide free primary education to children of economically weaker sections of society. The school is functioning in the college campus with all the necessary facilities needed for the school. The college provides a free meal (lunch) with a good nutritious menu. The children are provided uniforms, books, notebooks, stationery, and school bags by the college. The college has also made arrangements to provide them with basic knowledge of computers. A TV set with a TATA Sky connection has also been provided to the school by the college.

In the beginning of session 2022-23, the school provided uniform, books, bags, and stationery to the children. The children were taught basic behavioral etiquette, basic Hindi-English concepts, and reading/writing along with basic mathematics. Along with these the children were provided various indoor and outdoor game items like a carrom board, skipping rope, badminton racquets, etc. to keep them physically fit. On every Friday school children play some outdoor games. The school has also established a library with stories and other interesting books with story DVDs.

Various celebrations were conducted on occasions like New Year, Holi, Diwali, Independence Day, and Republic Day. Students were also taken out for picnics to India Gate and War Memorial.

The primary school has completed 19 years in its mission of education for children of persons from a weaker section of society. There are about 20 students presently enrolled in the school. Presently Mrs. Nidhi Singh is conducting the classes and other activities for Adarsh Vikas Kendra.

c) **National Communal Harmony Week**

The college observed the Communal Harmony Campaign and Fund Raising Week from 19-25 November 2023, under the guidelines of the Ministry of Home Affairs. Like previous years, this year also the faculty, staff and students donated generously to raise a fund of Rs. 55,000 which was transferred to The National Foundation for Communal Harmony (NFCH), an autonomous body under the Ministry of Home Affairs, Government of India.

d) **Refugee Camp**

In the month of January 2020, Ajay Kumar Garg Engineering College Ghaziabad adopted a Hindu refugee camp situated at Adarsh Nagar Delhi. Total 160 families having more than 850 family members are residing in the camp. These Refugees have come from Hyderabad area in Pakistan. The residents of the camp are making their livelihood through day to day earnings from the sales of mobile phone covers and seasonal vegetables etc. The college team visited the Refugee camp to learn about the living conditions and problems faced in day to day life of the residents of the Camp. During visit to the camp, the college team realized that the camp residents required winter clothing's and daily cleaning, washing and bathing

items. The College distributed blankets, shawls, soaps, plastic buckets, dust bins and brooms to each family residing in the camp and books and stationery items to school children residing in the camp. Based on the request from the camp residents and having felt the requirement, the college constructed a school room for small children of the camp and sewing machines centre for initial training and further use by the camp residents which could be a source of day to day earnings by them. A fence has been made to demark and safeguard the school campus. During COVID-19, the college distributed ration and vegetables to all the families residing in the camp for daily use and cash for any miscellaneous requirements/ milk for children and tea preparation. The items were distributed throughout the entire lockdown period which included atta, rice, daal, refined oil, salt, tea leaves, sugar, condiments, potato, tomato, onion and other green vegetables. The college has also procured and provided the play / sports items including swings, Seesaw and slides etc for the school children. The grass has been planted in the lawn area of the school campus. The flower plants have also been planted at the fence and in the area of school campus. Provision of ceiling fans and tube lights in the class room and sewing machine room has been made. Erection of bamboo poles for laying of electric wiring and provision of area light in the school campus has been made. The installation of solar power plant for the provision of electricity for school campus, fans, lights and running of submersible pump for watering the plants and lawn grass has been also completed. The college is in continuous contact with the residents of the refugee camp to support and help them in all kinds of day to day requirements and to add value in there camp life.

A team of refugees camp school children along with their teacher visited the AKGEC and presented a group dance during Deepawali function in the college on 04 Nov 2023. The Director General distributed blankets & prizes to the refugee camp children and their teacher.

e) **Corporation School:**

Ajay Kumar Garg Engineering College, Ghaziabad as part of its social responsibility to serve the society, has adopted the corporation school at Kazipura Village, which is at a distance of 3 Km from the college. The

college has undertaken many developmental activities for the Municipal Corporation School known as “Prathmik Vidyalya Kazipura”, Nagar Kshetra, Ghaziabad.

These include regular upkeep like whitewashing, plumbing maintenance, and electrical repairs in the school building. The college also provides sports equipment, supports horticulture, and donates computers to promote basic computer literacy. Additional support includes items like posters, sitting mats, furniture, library racks, and fans to create a conducive learning environment. In aiding the midday meal scheme, the college has installed washbasins for students and a designated area with a platform and tap for hygienic utensil washing.

f) **Unnat Bharat Abhiyan**

In a dedicated effort to contribute to the upliftment of rural communities, Ajay Kumar Garg Engineering College (AKGEC) has actively embraced the Unnat Bharat Abhiyan (UBA), a flagship program by the Ministry of Human Resource Development. UBA seeks to forge links between Higher Education Institutions and villages, fostering economic and social development through knowledge-sharing.

AKGEC, under UBA, has adopted five villages in Ghaziabad – Raghunathpur, Sadat Nagar Ikla, Piplehda, Galand, and Kalchhina. Through extensive surveys, the college has identified pressing issues such as the absence of safe drinking water, lack of school furniture, computer illiteracy, inadequate and unhygienic sanitation facilities, and a general unawareness of government schemes.

To address these challenges, AKGEC has undertaken various initiatives. The college organized an awareness program in Sadat Nagar Ikla and Galand villages in collaboration with the AKGEC skill foundation under DDU-GKY, to provide training programs for 10th and 12th pass students. Additionally, training sessions on strawberry plantation, mushroom cultivation, planting medicinal trees, and making organic compost were conducted in collaboration with Meri Aawaz Suno National organization, New Delhi.

In an ongoing commitment to the development of these communities, AKGEC has identified following key areas for intervention:

Competitive Books: The College aims to supply competitive exam preparation books and study materials, empowering students to aspire for higher education and employment opportunities.

Provision of Computers: AKGEC is working towards providing computers for each Panchayat Ghar in the adopted villages. These computers will facilitate digital literacy and grant access to educational materials for students.

Medical Supports: The College has initiated medical checkup facilities, including free medicine and tests, through Indo German Hospital for the people of Galand village. The college's free bus pickup and drop facilities further ensure accessibility.

AKGEC is confident that these initiatives will make a substantial contribution to the growth and development of students in the adopted villages, equipping them with the essential tools and resources to excel academically. The college remains steadfast in its commitment to the principles of Unnat Bharat Abhiyan, fostering sustainable progress and prosperity in rural India.

2.4. **EVENTS / ACTIVITIES HELD IN THE COLLEGE DURING THE ACADEMIC SESSION 2022-23**

The college regularly organizes technical events like conferences, workshops, training programmes, faculty development programs, seminars and Guest lectures. On an average each department organizes one guest lecture every month and one FDP or a conference every semester. In addition to about 42 guest lectures and various workshops, the following major events have been organized during the last academic year.

a) **Faculty Development Programs**

- FDP on "E-Mobility and Associated Power Electronics " 21st August to 25th August 2023
- Advancement of Artificial Intelligence in Cyber Security 19th – 23rd June 2023
- IDEA Lab FDP on Design Thinking (22-30 May'2023)

- FDP on Industrial ROBOTICS (28 March - 3 April 2023)
- Outcome-based Curriculum Design-13th – 17th February 2023
- Electronics & Communication Technologies for Futuristic Applications- 28 Nov - 02 Dec 2022
- FDP on Welding Technologies (27-31 Aug 2022)
- LabVIEW Essentials for Test, Measurements and Control” from 13th – 19th July 2022.
- UNBLOCK BLOCKCHAIN-1st– 5th August 2022

b) **Staff Development Programs**

- MATLAB & Circuit Simulation Lab-3 -7 April 2023

c) **Conference**

International Conference on Advancements and Key Challenges in Green Energy and Computing (AKGEC 2023) organized by the department of Electrical and Electronics Engineering on 24th and 25th February 2023.

d) **Guest Lectures**

College follows a practice to organize the guest lectures for faculty and students to bridge the gap between industry and academia and to make faculty well versed in the cutting edge technologies. The list of 83 guest lecturers conducted by departments during the session 2022-23 is attached as **Appendix `T`**. Details of 37 Alumni talks is attached as **Appendix `T-1`**.

e) **Vishwakarma Puja**

Vishwakarma's Puja, the festival to celebrate and worship God Vishwakarma, is celebrated in India on 17th September every year. According to the Hindu mythology, Vishwakarma is the presiding deity of all engineers, artisans and architects and is believed to be the Principal Architect of the Universe. The Vishwakarma Day on 17th September 2023 was celebrated by performing Aarti and worshipping the tools and the machines, in the Mechanical Engineering Workshop along with the HoDs, Deans, senior professors, Associate Professors of ME department, and workshop staff.

f) **International Yoga Day**

The college celebrated International Yoga Day 2023, showcasing its commitment to holistic health. Daily sessions, led by Yoga Acharya Shri Omkar ji and Col. M.K. Pandey, promoted physical strength and mental clarity. Special sessions on June 20th and 21st brought together administrative heads, faculty, staff, and students for stress relief and unity. Approximately 120 students and 30 faculty/staff members participated. The main event gathered 750 students and college leadership for a collective yoga session. Through these activities, the college emphasized wellness and spiritual awareness, empowering members to embrace yoga's transformative power.

g) **Events organized by professional and departmental societies in the college**

(i) **Events organized by Phoenix**

The Technical Society Phoenix along with IEEE Communication Society of Ajay Kumar Garg Engineering College organized an exhilarating Roborace event 'Robofestinate', on 25 Nov 2023 showcasing the intersection of technology, engineering prowess, and innovation. The event aimed to provide a platform for students to demonstrate their skills in designing and programming manual robots.

Phoenix celebrated its Founders day on 20-09-2023. Phoenix has been a beacon of innovation and collaboration. With a mission to foster knowledge exchange and hands-on experience, Phoenix has created a vibrant community of aspiring engineers dedicated to pushing the boundaries of technology.

Team Phoenix successfully conducted its annual technical fun activity DESOTRIX'22 on the 12th of November 2022. This event included a number of engaging tasks that evaluated the participants' knowledge and problem-solving skills. The event was open for all the students of second and third year. This activity received the participation of 42 teams of both second and third year. The event's main goal was to create a simple combination of learning and fun in which participants would be exposed to amazing ideas that would test their mastery of the fundamental principles of electronic circuits.

(ii) **Events organized by Horizon**

Horizon, the techno-managerial society of the College, organized KIRAN- Kaho India Ragging Aur Nahi, the AKGEC annual anti-ragging drive during 6th to 7th October 2022, to generate awareness against the ill practice of ragging for the II, III and IV year students.

This anti-ragging presentation began with telling students the need for an anti-ragging drive. It included the definition of ragging issued by UGC, some informative videos and a speech by the Proctor. It introduced to the students' different forms of ragging. It gave them a glance of what after-effects it can have. Besides throwing light on the various incidents of ragging in institutions across the country, it threw light on what actions are taken against the perpetrators.

Horizon also conducted Disha, the annual Orientation Program for I year students, from 7th to 12th November 2022. The programme embarked by a virtual college tour which described each and every aspect of our college, familiarizing our first-year students with the legacy, culture, infrastructure etc. It was followed by an address by the Proctor who discussed the vitalities of discipline and conduct in a student's life in the forthcoming four years.

The G20 2023, New Delhi summit was the first ever to be hosted in India and in South Asia. To celebrate the motto "One Earth, One Family, One Future", Ajay Kumar Garg Engineering College took an initiative to conduct an event that brings together a contingent of creative minds to discuss some global issues. Team Horizon organized the Model G20 summit on 24th March, 2023 which was a literary fest incorporating multiple stages. The first round was the formal letter writing round, followed by the second round of group discussion and the final round being the speech delivery.

(iii) **Events organized by Oorja**

OORJA, the Electrical and Electronics Engineering Society, conducted a Mini Project Exhibition for 2nd year (III Sem) EN students

in collaboration with IEEE PES Chapter on 08th February 2023. The idea of conducting of this event was to encourage and motivate students for upcoming academic activities. It was a captivating event as 15 teams participated in this exhibition. Overwhelmed by the participation of students, the event dispersed with a sincere hope that such interactive events should be organized again by giving the students a chance to display their talents and gain knowledge. Two prizes were given to the winner and Runner up team.

Oorja Society organized an event named GLEAM on 21st April 2023, which was a great success with a total of 53 teams participating in the event. The event as divided into three rounds, which tested the participants' knowledge, skills, and technical expertise. The first round of the event was a quiz round in which the participants had to solve four quizzes. The second round was a game round, and each participant had to play four games within one minute. The games included Dart, Jenga, Boggle, and Spot the Difference. The third round was a surprise round, 7 teams qualified for this round and the participants were given one MCQ to solve. After solving the question, the participants were asked to implement the solution on a breadboard. The team who completed the circuit within a given time was declared the winner.

On 5th November 2022 a workshop “ROBOIGNITOR 2.0” was organized by Oorja Society. It was a captivating workshop as it received massive participation from students of the all departments. A total 57 registrations were made, later 48 participants attended the workshop. Participants were distributed to make a team of 6 members for the hands-on session which was after the Theoretical Session. In the Theoretical session, the members of team Oorja gave the students’ knowledge of Robots with focus on making a Voice Recognition Robot. Students also had the privilege to go through some Robot equipment. The hands-on session then followed for the students to have a real experience of how a robot works. The hands-on session gave students a better experience of what they learned in the theoretical session.

(iv) **Events organized by Conatus**

The society conducted recruitment drive Quest'22 on 21st September, 2022 to induct new students from II year. The students were selected on the basis of a quiz and personal interviews conducted by the senior students.

Team Conatus released the 21st edition of the annual technical magazine CONOSCENZA on the occasion of the 17th Foundation Day of Team Conatus. The magazine comprised articles of various upcoming software and hardware, games and tutorials related to emerging technologies. Magazine Launch Date was 10th October, 2022.

Team Conatus organized a coding event named 'Game of Codes' for the students of 2nd to 4th year on 5th December, 2022. More than 120 teams registered for the event. The event consisted of two rounds of 45 minutes each to test the programming abilities of the participants. In the first round, there were 3 questions to be solved in C/C++ and in the second round; there were 3 questions to be solved in Python. Final result was calculated on the basis of both the rounds. The rounds were hosted on hackerrank.com.

Team Conatus organized a 2-day event named 'Ronins of Citadel' for the 1st and 2nd year students of the college on 12th and 17th May, 2022. Every team was supposed to be of 3 students. More than 150 teams registered for the event. The first day of the event was a series of puzzles, crosswords and some fun elements. The assessment of their answers was done by the organizing team. The second day consisted of cryptography. The teams were given encrypted descriptions of some weapons and they had to find out the name of the weapon. The teams with most number of correct weapons were declared winners.

(v) **Events organized by SAMVEG, SAE**

SAE INDIA is the largest affiliate of SAE International with 6000+ colleges throughout the country and has been in the forefront in bringing several events modelled on international competitions which has grown enormously over the years. SUPRA is the national level

engineering student formula competition where teams from various engineering colleges participate. In this, students design and fabricate a formula style vehicle. In recent Edition 60 teams of various engineering colleges from all over the country participated, which consists of more than 1500 participants. In this event specification of the vehicle frame and engine are restricted to 610cc engines, so that knowledge, creativity and imagination of students are fully challenged.

The vehicle which has been built by students team with passion and dedication was loaded in the truck on 10th July 2023. Our college team titled Bravado Motorsport involved 25 members from several engineering branches. In this event, the team built the car considering all the rules and regulations mentioned in the rule book by SAE-INDIA.

(vi) **Events organized by NIRMAAN**

Nirmaan, the society of Civil Engineering, conducted recruitment drive (VARANA'22) on 22-23 Sep 2022 in two rounds. This was continued by pen paper round and personal interview. First round had had basic aptitude, basic English and basic civil engineering questions.

Spardha 23, a Bridge Competition, was conducted by Team Nirmaan in order to boost the insight of students with skills and innovation by providing them with the opportunity to explore their talent and intelligence, what they have got so far. The event Spardha'23 was conducted for students of all years from all branches in two parts including Fun Round – Treasure Hunt and the Technical Round – Bridgekeerti. Three prizes were awarded to the 1st three teams.

(vii) **Events organized by Robotics Club**

AKGEC team has been participating in ROBOCON since 2014 and to date has competed eight times in the event. In ROBOCON 2022 AKGEC was the only team from the North to reach the finals of the competition held at Thyagaraj Stadium, New Delhi and secured AIR-16. This year AKGEC secured AIR-21 in ROBOCON-2023.

Robotics Club, in collaboration with Oorja society, participated in the AKTU Technical Zonals held on 8th and 9th December 2022 and

secured the first position in the featherweight category of Robowars. Robowars is a thrilling competition where custom-built robots engage in head-to-head battles to immobilize or overpower their opponents. The team demonstrated exceptional engineering prowess, strategic thinking, and teamwork, ultimately emerging victorious in a challenging field of competitors.

(viii) Events organized by Open Source Software & Cyber Security Club

One-day seminar on “CYBER SECURITY CHALLENGES” was organized by ACM Student Chapter and Open Source Software & Cyber Security Club under Department of Computer Science and Engineering on 27th February 2023 for 6th semester CSE students. The seminar was conducted by Mr. Ashwani Kumar. He is a cyber security practitioner, learning and guiding about security management, vulnerability assessment, Incident response, threat hunting and more. Currently he is working with Linear Stack. 126 students participated in the seminar and explored various dimensions of cyber security. The workshop encouraged students to gain knowledge on various challenges of cyber security.

(ix) Events organized by Programming Club Event Details 2022-23

The Programming Club - AKGEC organized a dynamic two-day workshop titled "#include" on 8th-9th October, 2022 which centered on Competitive Programming and Data Structures and Algorithms (DSA). Participants engaged in hands-on problem-solving sessions, where they delved into topics like Competitive Programming fundamentals, essential data structures, and crucial algorithms. The interactive atmosphere and mentor-guided discussions allowed attendees to deepen their understanding and hone their coding skills effectively. On the second day, the workshop continued with an engaging interactive session, providing participants with the opportunity to interact with experienced mentors. The highlight of the event was the programming contest on 11th October 2022 which was followed by the interactive session. The top-performing participants were offered the chance to join the prestigious Programming Club - AKGEC, which

provided access to a supportive programming community, advanced coding resources, and participation in various programming-related events.

(x) **Events Organized by Machine Learning Centre of Excellence**

One day workshop on “Data Visualization” was organized on 21 February 2023 for 6th semester CSE students in association with Shape my skills Pvt. Ltd., Noida which is providing IT education in latest technologies: SAP, Big Data, Python, Data Analytics, Artificial Intelligence etc. The topics covered during theory and hands on practice session included Data Visualization Techniques for ML systems and working on Tableau. 162 students participated in the workshop and were provided “Certificate of Participation” by Shape my skills Pvt. Ltd.

(xi) **Events Organized by Foot Print, the Art and Cultural Society of the college**

The society organized various theme based competitions during the year. The winners of the various competitions were awarded with certificates and cash prize money. The creativity and originality of the young artists were displayed in the College Exhibition Arcade. The society organized various events in the session 2022-23 starting from the Silver Jubilee celebrations where students got the chance to perform on the stage. The society also takes initiative for organizing Anti Ragging, Anti drug & Gender Equality poster making competitions every year. The society also organized several workshops which aim at nurturing the students’ boundless creativity, amplifying their artistic talent, and equipping them with an array of new skills. Society also organized one recruitment drive for the students of first year & second year every year. Students with artistic skills, Creativity and vision to uplift the society were selected through this recruitment drive.

h) **Inter college competitions**

In addition to the above mentioned in house events, our students participated and did well in various literary, cultural, technical & sports

events by visiting outside colleges / institutes. Participation in these events has provided our students an exposure to students and activities in other institutions. Good performance of our societies and teams in these inter-college activities has been a great source of motivation and encouragement to the students as well as pride to the college. The details of these events are placed at **Appendix 'U'**.

In the Zonal Sports Meet organized by AKTU at RKGIT from 3rd to 4th November 2023, the students showcased formidable skills and secured 9 Gold, 8 Silver, and 9 Bronze Medals. All the gold medalists qualified for the State Level Sports Fest organized at SRIMT, Lucknow, held during 1st and 2nd December 2023. AKGEC teams, despite facing numerous challenges, instilled zeal and enthusiasm, ultimately winning 7 Gold and 1 Silver medal. The details are placed at **Appendix 'U-1'**.

2.5.) **NEW INITIATIVES TAKEN BY THE COLLEGE DURING 2022-23**

MOUs SIGNED

- (a) Ajay Kumar Garg Engineering College (AKGEC) &, Siberian State Industrial University Russia have joined hands and signed MOU on 16 September 2022 with an aim for joint scientific research, the preparation of scientific and pedagogical personnel of higher qualification, the exchange of educational and methodological, scientific literature and didactic materials between SibSIU and AKGEC.
- (b) Ajay Kumar Garg Engineering College (AKGEC) &, Ru Tag have joined hands and signed MOU on 29 September 2022 to facilitate young engineers to get the chance to learn industry-oriented skills and have hands-on experience with the state-of-the-art tools comprising of the latest hardware's provided by them.
- (c) Ajay Kumar Garg Engineering College (AKGEC) &, Bhartiya Vidya Peeth have joined hands and signed MOU on 12 October 2022 to

collaborate to produce industry-ready, highly skilled, globally employable young engineers in the field of Industrial Automation, Robotics, Manufacturing & Fabrication, to support the “Make in India & Startup India’ initiative launched by Govt of India, through Skill India Mission.

- (d) Ajay Kumar Garg Engineering College (AKGEC) & Octagon Precision India Pvt. Ltd signed an MOU on 20 March 2023 to upgrade the state-of-the-art Calibration and technical centre and set up the SPC lab facility in the Advance Manufacturing centre at AKGEC Campus Ghaziabad.

2.6 INFRASTRUCTURE DEVELOPMENT

(a) AKGEC DRONE ACADEMY

AKGEC under its skills initiative, developing the AKGEC Drone Academy. This academy aims to operate as ‘Remote Pilot Training Organization (RPTO)’ approved by Directorate General of Civil Aviation (DGCA), providing students with Unmanned Aerial Vehicle (UAV/ Drones) flying licenses/certifications. To set up the RPTO, the process for compliance of DGCA regulations is under progress. Infrastructure required to meet basic eligibility criteria of RPTO as per DGCA guidelines such as :Two type-certified Drones & Two flight simulators were procured and a Dedicated Drone Maintenance and Flight Simulator Room has been built up adjacent to Drone Flying Field (Existing Football Ground/Green Flying Zone) . This area is under furnishing and expected to complete the work by 15th March,24. One Classroom required to reserve for training has also been identified near Drone Academy area in CS/IT Building at Ground floor In addition to above, for in house development of Remote Pilot Aircraft (RPA) at the AKGEC campus, a drone manufacturing workshop is planned to schedule in the month of February. This workshop aims to produce two RPAs, providing valuable flying experience to our students. A total of five faculty members from various branches of engineering, including Mechanical, Electrical, Electronics and Communication Engineering, and Computer Science Engineering, are nominated to work as Drone Training Instructors. Two of them have undergone the 'Train the Trainer' program conducted by Drone

Destination, Gurugram and successfully received DGCA UAV Flying Instructor Certification. The other faculty may also take up the training and complete the training in next six months. The completion of all these requirements, including documentation, is currently in progress, and we anticipate submitting our application to DGCA for RPTO within the next week. Following the submission of our application, we expect a DGCA audit of our facility within two months. It is expected that after receiving due approval from DGCA, AKGEC Drone Academy will start its operations by August,2024

(b) COMMON FACILITY CENTER(CFC)

Under the ‘One District, One Product (ODOP) Common Facility Centre (CFC) Scheme” District Ghaziabad is identified as a hub for manufacturing of General Engineering Products. Many of the manufacturers in the region are small and medium industries that need modernization, machinery and productivity enhancement support through the ODOP CFC. To establish a Common Facility Center at the AKGEC Campus, a Grant of Rs.13.4 Cr is sanctioned under the ODOP CFC scheme of Govt. of Uttar Pradesh, and “AKG Foundation for Innovation and Product Development” has been incorporated as a Company Limited by Shares, and is a consortium of 22 stakeholders from the General Engineering Industries. The main objective of this initiative is to enhance synergy between Industry and Academia and to support Medium and Small Industries (MSMEs) of the region by providing R&D Support for new product development and also training their employees and young students to learn new and upcoming technologies for their career advancements. Under This project a High-End Engineering Product Development Facility for Local Industries including a Modern Tool Room with an Industry 4.0 interface, a Material Testing Lab and a Research & Development Lab has been established. 90% machines and equipment as listed in DPR have been procured. Installation, Testing and Commissioning of all supplied machines is under process. Procurement of balance two major machines tools is under process and last tender to procure miscellaneous items including specialized tools and fixtures is uploaded on GeM portal and expected to finalize soon after its opening

on 18th Feb 24. Two financial trenches from ODOP Cell have been released so far. First trench of Rs 535.91 Lacs was released on 1st December 2021, Second trench of Rs 401.93 Lacs was released on 29th December, 2023. Our request to release last trench of Rs 401.93 Lacs has been submitted and expected to release in the month of Feb'24

2.7 TRAINING UNDER GOVERNMENT SPONSORED SCHEMES

(a) Deen Dayal Upadhyay Gramin Kaushalya Yojna (DDU GKY)

DDU-GKY was announced by The Ministry of Rural Development (MoRD) which is uniquely focused on rural youth between the ages of 15 and 35 years from poor families. As a part of the Skill India campaign, it plays an instrumental role in supporting the social and economic programs of the government like the Make In India, Digital India, Smart Cities and Start-Up India, Stand-Up India campaigns.

AKGEC Ghaziabad is one of the Project Implementation Agencies (PIA) of the DDU – GKY Project and has signed an MoU with UP Skill Development Mission to train 280 candidates from eight districts in various domains over 3 years. This project envisages training the under privileged class of rural areas from minority, SC/ST categories and girls.

With the target to train 280 candidates, 259 candidates have been trained under this scheme. More than 41% are placed at good packages in the reputed companies like Hero Motor Corp, Micrometric Manufacturing Systems Pvt Ltd., Mita India Pvt Ltd., Tesmo India, Neel Metal Products Ltd (JBM Group), HDFC, iEnergizer, Corantham, Althourist Technology, Cogent, Merico India Pvt Ltd., Khadi India, Maruti, Tech Mahindra, Route to Shine, Jain facility management services, Valencia facility services, Elektro Labs, Eureka Outstanding Solution Pvt. Ltd., Cosmic digital Services, HP Enterprises, Novho Careers Pvt Ltd., Financial Services Solutions and Janta Khadi Gramudyog Samiti etc. The process of securing placements for the remaining students in reputable companies is still ongoing.

(b) PMKVY 4.0 (Skill Hub)

The Ministry of Skill Development and Entrepreneurship (MSDE) in consultation with the Ministry of Education (MoE) has planned to

implement the '**Skill Hub Initiative**' under Pradhan Mantri Kaushal Vikas Yojana 4.0 (PMKVY 4.0). This Scheme aims to facilitate and make education more relevant and create an industry-fit skilled workforce. Skill Hubs are nodal skill centres identified to provide skill development and vocational training opportunities to target population segments. After sometime these Skill Hubs will associate with adjoining education and skilling institutions (spokes) over a district, or a cluster of adjacent districts, to provide access to skill development training at the hub location or the spoke location.

In line with the 2020 National Education Policy (NEP), there is a renewed emphasis on vocational skill training provided by higher education institutions. As part of this initiative, various demand-driven and industry-linked skilling courses are being offered, including modern courses such as Industrial Automation Specialist (IAS/Q8005), 3D Printing (IAS/Q5602), Embedded Full-Stack IoT Analyst (ELE/Q1405), PLC Programmer and Troubleshooter (IAS/Q5604), and Production Engineering (CSC/Q1201).

Ajay Kumar Garg Engineering College, Ghaziabad, has been chosen to operate within the skill hub program and has been assigned a target of 240 trainees. Currently, 106 candidates have completed their training under this program, and ongoing training is in progress for 76 candidates. The total project cost for this initiative amounts to Rs. 36,89,320/-.

(c) Uttar Pradesh Skill Development Mission (UPSDM)-Startup Training Provider

Uttar Pradesh Skill Development Mission (UPSDM) is implementing the UP-Skill Development Programme in mission mode with a target of training the youth of Uttar Pradesh in short-term vocational trades.

To achieve the above objective, the UPSDM aims to engage private training providers under the **Startup Training Provider Scheme** for imparting short-term skill development training to eligible candidates.

Recently, AKGEC Skills Foundation has been empanelled with UPSDM under the scheme to conduct training of youth with job roles like Field Technician Computing and Peripherals (ELE/Q4601), Automotive CNC

Machining Technician (ASC/Q3503), Four Wheel Service Technician (ASC/Q1402), Automotive Welding Technician (ASC/Q3103), Automotive CAD Technician (ASC/Q3503) and allocated a target of 250 Trainees with total project cost is Rs. 1,11,72,250/-

(d) UPSDM: Private Engineering College Training Provider

The Uttar Pradesh Skill Development Mission (UPSDM) is actively executing the UP Skill Development Programme with a mission-oriented approach, aiming to provide short-term vocational training to the youth of Uttar Pradesh.

To fulfill this objective, UPSDM has enlisted AKGEC as a Private Engineering College Training Provider in the state of Uttar Pradesh. AKGEC has been assigned a target of training 500 individuals under this program, with a total project cost of Rs. 2,22,163,575/-. The training program includes various job roles such as Industrial Automation Specialist (IAS/Q8005), Additive Manufacturing (IAS/Q5602), Embedded Full-Stack IoT Analyst (ELE/Q1405), Field Technician Computing and Peripherals (ELE/Q4601), CNC Operator Turning (CSC/Q0115), and Manual Metal Arc Welding (CSC/Q204).

2.8. LAURELS AND ACHIEVEMENTS

(a) NAAC Accreditation with A++ Grading

AKGEC reached a momentous milestone by attaining NAAC Accreditation with A++ Grading. NAAC A++ grading is a prestigious recognition for AKGEC and reflects our commitment in maintaining rigorous academic standards, promoting holistic development, and fostering a conducive learning environment. It's a matter of pride to have become the only Self Financed Engineering College in the entire Uttar Pradesh to receive the NAAC A++ grading.

(b) Smart India Hackathon 2023

For the Smart India Hackathon 2023 grand finale, an impressive total of 18 teams from both the software and hardware editions were selected from AKGEC. This sets a record as the highest number of teams selected from any public or private university/institute in Uttar Pradesh and places

AKGEC among the top 10 institutes in India. Notably, AKGEC competed closely with IIT Kharagpur, as both institutions secured four titles. AKGEC's winning teams were Justice Link, Swasthya Sahayak, Tech Conquer, and Technovertz and comprised 24 students who were announced as the winners of Smart India Hackathon-2023 (Software Edition) at Kolkata, Raigarh, Guwahati and Amravati. All these 4 winning teams were awarded a prize amount of Rs 1 lakh for each problem statement.

(c) **Excellent Performance in Zonal and State Level Sports Fest 2023-24**

AKGEC participated with full enthusiasm in Zonal Sports Meet organized by Dr. APJ Abdul Kalam Technical University in RKGIT from 3rd to 4th November 2023. The students showed formidable skills and grabbed 9 Gold, 8 Silver and 9 Bronze Medals. All the gold medalists qualified for the State Level Sports Fest organized by AKTU in SRIMT, Lucknow held during 1st and 2nd Dec 2023. AKGEC teams, outshining all the odds inculcated zeal and enthusiasm amongst them and won 7 Gold, and 1 Silver medals.

AKGEC also won the greatest number of Gold medals in AKTU State Sports Fest 2023-24 under Ghaziabad & Modinagar Zone. Ghaziabad & Modinagar Zone has won the AKTU State Sports Fest for the last 9 years with substantial contribution from AKGEC Sports Team.

3. Future Plans

(a) **Establishment of AKG University**

In light of our 25 years of excellence, an initiative has been taken to pursue university status of AKGEC. With a comprehensive proposal and necessary approvals secured, we are currently awaiting the issuance of the Letter of Intent (LoI) to proceed. Following our proposal, an inspection was conducted on 25th July 2023. Based on the recommendation of the inspecting team, a preparatory meeting was convened on 8th November 2023, at the office of the Principal Secretary, Higher Education, for discussion and clarifications. Subsequently, in a meeting chaired by the Chief Secretary on 10th November 2023, at Lok Bhawan, our proposal for private university status was passed

and cleared for issuing the Lol. Timely receipt of the Lol is crucial as we prepare for the upcoming academic year.

Significant progress otherwise has been achieved in the pursuit of AKGEC's transition to State Private University status. Acts, statutes, and ordinances have been meticulously prepared, and the evaluation scheme has been finalized. Additionally, efforts are underway to review course content for the first year, ensuring alignment with department-specific requirements.

(b) Establishment of Center of Excellence for Additive Manufacturing (CoE)

Centre of Excellence in Additive Manufacturing at AKGEC

AKGEC in its endeavor to promote advance technologies in education and entrepreneurship among youth has submitted proposal on 26th April, 23 to Department of IT & Electronics(DoIT) for the establishment of a cutting-edge Centre of Excellence (COE) in Additive Manufacturing under Uttar Pradesh Startup Policy-2020, Govt. of UP

The Project with an outlay of Rs 20 Cr., where DoIT contribution is Rs 10 Cr. (50%) and AKGEC and Industry Partner Contribution is Rs 10 Cr (50%), is expected to setup state of art Additive Manufacturing facility comprising some of the latest tools and technologies capable of producing

parts/products/prototypes using polymer, composites, resins, biomaterial and metal alloys.

The proposal was duly presented on 16th Nov,23 before the Project Implementation Unit (PIU) of DoIT chaired by Hon'ble Principal Secretary for interim approval and recommendation. On the recommendation of PIU, Project Presentation was made before Policy Monitoring Implementation Committee (PMIC) of Govt of UP, Chaired by Hon'ble Infrastructure & Industrial Development Commissioner (IIDC) Shri Manoj Kumar Singh, IAS at Lucknow on 11th Jan,2024

Project, after due recommendation of PIU and PMIC, has been sent for approval by Hon'ble Cabinet, Govt of Uttar Pradesh and final letter of approval is awaited. The proposed CoE, under the five-year project, has the objective to Strengthen the startup ecosystem in Uttar Pradesh. It aims to Incubate 100 promising product-based startups, provide training on entrepreneurship and conduct vocational programs in Additive Manufacturing.

CoE shall possess maturity and experience in incubation, exemplary standards of R&D and promote best practices for nurturing entrepreneurship. The intent is to create a world class Center of Excellence which will house 100 most promising product based Startups from India and abroad in the domain of Emerging Technologies - Additive Manufacturing and encourage domestic manufacturing across the value chain to promote 'Make in India' and 'Atma Nirbhar Bharat'.

The CoE Programme conceived by the Department of IT & Electronics, Government of Uttar Pradesh under the aforementioned 2017 Policy focus primarily on building an innovation fuelled entrepreneurial ecosystem with the aim of inclusive socio-economic development through job and wealth creation.

4. **PRESENTATION AND APPROVAL OF COLLEGE EXPENDITURE FOR THE YEAR 2022-23 AND BUDGET FOR THE YEAR 2023-24**

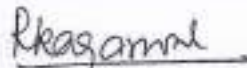
MCS

The audited expenditure against budget for 2022-23 is placed at **Appendix 'V'**. The budget and expenditure up to January 31, 2024 against the year 2023-24 is placed as **Appendix 'W'** and the proposed budget for the financial year 2024-25 is placed at **Appendix 'X'**

5. **APPROVAL OF THE APPOINTMENTS MADE SINCE LAST BOG MEETING**

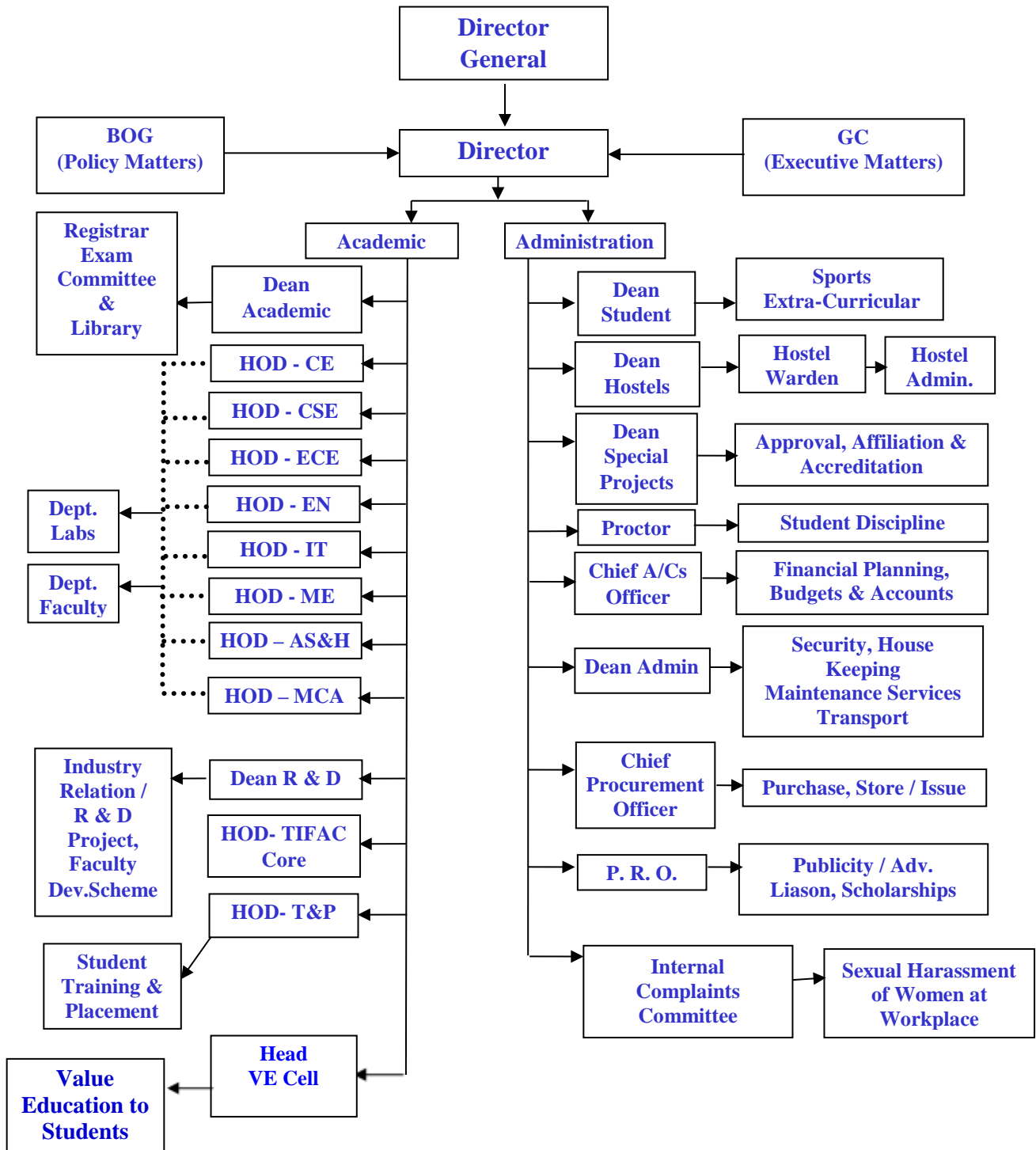
During the period from last BOG meeting, the college has recruited 58 faculty members and 27 staff members. A list of all faculty and staff members appointed is attached at **Appendix 'I'** and **'J'** for approval.

6. Any other point(s) with the permission of the Chair.



Dr R.K. Agarwal
Director General

ORGANOGRAM OF COLLEGE



AJAY KUMAR GARG ENGINEERING COLLEGE**MINUTES OF HoD's MEETING HELD ON 06th Oct 2023**

14 Oct,23

HoDs' meeting was held on 06th October 2023. The following were present:

Dr. RK Agarwal	Director General
Dr. Hemant Ahuja	Director
Prof. SL Kapoor	Dean 1 st Year
Prof. IP Sharma	Dean Hostels and Library
Dr. Anu Choudhary	HoD CS
Dr. Rakesh Srivastava	HoD Civil
Dr. Pallab Biswas	HoD ME
Prof. Neelesh Gupta	HoD ECE
Prof. Rahul Sharma	HoD IT
Prof. BK Sharma	HoD MCA
Asso. Prof. Som Ashutosh	TIFAC CORE
Dr. Shashank Sahu	Prof. In-charge CSE (AI & ML, DS)
Dr. Anupma Sharma	Prof. In-charge CSIT
Dr. Avdhesh Gupta	Prof. In-charge CSE
Dr. TR Pandey	Director AKGIM

The Director General welcomed all present and mentioned that now onwards we will be reviewing the progress on old agenda points of previous meeting before discussion on the new agenda points. The Director General mentioned that Dr Hemant Ahuja will take stock of the progress on old points and brief the Director General about the progress on the points. The Director General further desired that all points told by him must be actioned on urgent basis. The Director General further mentioned that leadership should grow and all HoDs should act as engines for their respective departments, and show continuous progress of their respective department. The Director General further advised all HoDs to delegate the work/ responsibility and keep monitoring closely and be fully involved and informed for better office. The Director General further advised not to delegate each and every thing and we must think which task to be delegated and which should not be delegated. All problems faced during execution of the task must be solved at the earliest.

1. Perception for the College. Prof Rahul Sharma mentioned that to improve the perception of the college the faculty likes need to increase. The DG mentioned that all faculty are to mandatorily like the website and give good comments. The Director General mentioned that Prof Rahul Sharma has to take a lecture for all faculty on the subject. The Director General further stated that good publications / research papers in journal and patenting must be progressed.


2. Alumni Networking. The Director General stated that Dr Hemant Ahuja, Dr. Pallab Biswas and Prof Rahul Sharma are to make a time bound plan to formulate an effective and strong Alumni Networking. The Director General further expressed that out station Alumni can be guided and encouraged to run their local Alumni chapters.

3. Review of 1st year syllabus. The Director General stated that the college is in the process of becoming a University. The review of first year syllabus needs to be done objectively and urgently by all concerned. Also proper distribution of credits must be decided by the team. The Director General asked Dr Hemant Ahuja to give a detailed presentation on various decisions about names of different branches to be run, formation of Board of the Studies and list of open electives etc.

4. Dealing with UFM and Absentees cases during STs and PUTs. The Director General asked all HoDs to take strict action against the absentees and UFM cases. Primarily the parents of the students found using UFM and / or having less attendance / debarred cases may be intimated through letters and UFM cases must be expelled from then exam and Rs1000 per UFM may be fined.

5. Students Attendance in Placement Process/ Personal Interviews. The Director General mentioned that the college placement has been good but further improvement is needed. The Director General advised all HoDs to contribute in improving the placement of their department students. The Director General mentioned that effective utilisation of PDP classes will certainly improve the possibility of placement. The Director General asked all HoDs to nominate faculty coordinators for PDP classes. The Director General further desired that all eligible students must appear in placement process. The Director General asked all HoDs to carry out a thorough analysis of students getting rejected during placement process and find out at what stage the student/students have been rejected and why. The Director General advised that all placement companies coming to college should be taken for a round to all the labs of TIFAC CORE and Block Chain.

6. Presentation By Head T&P. Dr Rakesh Srivastava mentioned that the placement company have given adverse comments about the fundamental knowledge of the subject of students of our college. Also the students have casual attitude while coming for placement / personal interview. Some of the students were found in non-formal (casual) dress. The Director General asked HoDs of ME, EN and Civil Engineering to formulate a 10 hours course module on basic fundamentals before 20 Oct 2023. The Director General desired that the module should be conducted by the respective HoD personally. The Director General further advised that many New faculty have joined the college and these faculty need to be inducted properly to bring them up to our college standard. The Director General further emphasized in his concluding remarks that all HoDs should visit the classes of the faculty every week. There being no further point the meeting came to an end at 11:30 am.



Prof IP Sharma
Dean Hostels & Library Director
Ajay Kumar Garg Engg. College
Ghaziabad