Major General Jamil Masud HI (M) takes over as commandant

Major General Jamil Masud took over as Commandant Military College of Engineering on July 17, 2017. He was commissioned in the Corps of Engineers and joined 173 Engineer Battalion in 1985. He commanded a Md Infantry Battalion along the Line of Control (LoC) and then 100 Engineer Battalion from Mar 2003 to Jul 2004 at Naran and later moved the unit to 14 Div Okara in Nov 2003. He also served as Commandant Corps Engineer at Bahawalpur.

Maj General Jamil is a graduate of Command and Staff College Quetta, National Defence University Islamabad and College of Defence Studies China. He has also served as BM of an Infantry Brigade, GSO-1 of an Infantry Division and at MO Directorate, GHQ. He has been Dir Plans at Joint Staff Headquarters and DG W&CE (Army) at GHQ. Gen officer has also been the faculty of MCE, Risalpur and NDU, Islamabad.

Academic Research

BE Civil Engineering program gets accreditation of OBE System

Pakistan Engineering Council (PEC) assesses the quality of engineering educational institutions by evaluating various constituent elements such as academic ambiance, infrastructure, financial resources, physical resources, human resources, supporting systems like library resources, computational resources, and avenues to mould and develop the student’s personality and learning characteristics. BE Civil Engineering Program of MCE is among one of the few programs of the nation accredited on Outcome-Based Education System Criteria set by PEC.

Further based on the satisfactory level of compliance against accreditation criteria and quality standards, particularly the breadth and depth of the curriculum, Quality Management System (QMS), implementation of the Outcome Based Assessment procedures and Continuous Quality Improvement (CQI), reaccreditation was granted for two years to MCE by PEC.
MCE faculty publishes thirty papers in International journals and conferences

In Spring 2017 MCE faculty had thirty publications out of which twenty-one were International Journal publications, two local journal publications, and seven international conference publications. Fourteen out of these publications were ISI indexed journal papers with impact factor. Dr Muhammad Irfan had a total of six publications, Dr Anwar Ahmed and Dr Hafiz Zahoor Ahmad Khan had four publications each, Dr Naeem Shahzad, Dr Rai Waqas Azfar Khan and Assistant Professor Dr Inam Ullah published three papers each, Dr Mazhar Iqbal, Dr Bilal Khurshid and Dr Faisal Yousafzai had two publications each and Lec Asim Khan published one paper. MCE is a research focused institution and the research publications are a proof of that.

MCE develops several national and international collaborations for strengthening its programs

MCE strives to provide opportunities for specialization and enriched learning through collaborations with industry and academia, both nationally and internationally. Several collaborations were done in the last semester which include collaboration with University of Witswatersrand South Africa and University of Engineering and Technology, Peshawar. In addition to this Southwest Jiaotong University China offered 10 MS and 2 PhD scholarships to the students of MCE. Establishment of CPEC Joint Research Center is also underway at both universities.

Four MS students give their thesis defense presentations in Spring 2017

In Spring 2017, four students of Military College of Engineering defended their MS thesis. Three of the students were from Disaster Management Department (DM) and one student was from Construction Engineering and Management (CE & M). Muhammad Iqbal Javed Akhter from DM department defended his thesis titled ‘Integration of Disaster Risk Reduction and Climate Change Adaptation/ Mitigation in Pakistan’ on February 23, 2017. His supervisor was Dr Col Muhammad Irfan. Muhammad Waseem Yousaf’s thesis was titled ‘Development of an Aviation Disaster Management Framework of Pakistan at par with International standards and practices’. He defended it on March 24, 2017 under the supervision of Lt Col Dr Naeem Shahzad. Ansar Zaman from CE&M department defended his thesis titled ‘Formation of Risk based Management Framework for Highway Bot Projects in Pakistan’ on April 20, 2017. His supervisor was Dr Col Muhammad Irfan. Hisham Bin Hafeez Awan from DM department defended his thesis on May 16, 2017. His thesis was titled ‘Influence of Urban Sprawl on Micro Climate in Pakistan- A case study of Abbottabad’. His work was supervised by Brig Dr Shahid Iqbal and Lt Col Fawad Akram.

MCE is currently offering MS in Disaster Management, Construction and Engineering Management, Transportation and Structures.
Student Affairs Office organizes Summer Camp for children

Student Affairs Office at MCE conducted a summer camp for the children of Risalpur Cantt from July 24th, 2017 to August 4, 2017. The extreme weather conditions in Risalpur do not allow for a lot of outdoor activities for children. Dean Civil Engineering Wing Brig Dr Sarfraz took the initiative to reach out to the families in Risalpur and involve them in extra-curricular activities. He tasked the Student Affairs Office to organize a summer camp for the children to provide them with fun filled activities during the summer that will appeal to their interests and liking. Before the camp started about thirty children were expected to participate but within two days of the start of camp seventy children enrolled in it. The kids were divided into two groups juniors comprising of grade 1 to 5 and senior group comprising of grade 5 to 10th. Some of the activities were combined for both groups and others were separate. Activities held during the camp included sports coaching of cricket and football, tug of war, indoor games, mental math, a movie, essay competition, story writing, calligraphy, singing competition, arts and crafts, drone flying and the highlight of the summer camp being a puppet and magic show, for which a team was called in from Rawalpindi. The summer camp was enjoyed by all and gave children a refreshing feeling before they headed back to school in mid August.
MCE students brings laurels to the institution by bagging top 3 positions in Bridge competition at Techno Fest 2017

The Institution of Civil Engineers (ICE) Student Chapter UET Peshawar arranged a 3-day event 'TECHNO-FEST 2017', from 10th to 13th May at UET Peshawar. During the Techno Fest a bridge competition was held in which 130 teams from all across the country participated. Military College of Engineering (MCE) students bagged all three top positions in this competition. The first position holder MCE team comprised of Paying Cadets Mohammamd Aizaaz-ul-Haq and Mohammed Abdullah Saeed. Their bridge was 108 grams and lifted a weight of 84 kilograms which was tested on a UTM. With an efficiency of almost 800% (778 % o to be precise) they topped the competition.

The team that won the second place comprised of Paying Cadets Jahanzeb Ahmad, Usman Shabbir, and Baber Ali. Their bridge's efficiency was 539 % and the team that won the 3rd prize had an efficiency of 524 %.

MCE holds Bilingual Declamation Contest

Intra-MCE Declamation Contest was organized on December 14, 2016. The college dean, Brig Sarfaraz Ahmed, graced the occasion as chief guest. The bilingual (English & Urdu) competition brought together talented speakers from diverse backgrounds. A total of ten teams participated in the competition. Each team included one speaker each in serious and humor categories. GC Salaar and GC Nayyar won the first position, while GC Tanawush and GC Mohsin secured the second place. Towards the end, the chief guest presented certificates and trophies to the winning teams.

NUST H-12 campus wins Intra-NUST Basketball Championship

Basketball is one of the favorite sports of many students and faculty at Military College of Engineering. They do not miss out on any opportunity to demonstrate their skills in the sport. This time around, it was MCE itself to organize “Intra-NUST Basketball Championship” at the college from November 22 to 27, 2016. Teams from NUST constituent colleges participated in the event. After nail-biting pool matches, MCE and NUST Islamabad Campus managed to qualify for the final, which the latter won to claim the title. Trophies and medals were distributed after the match.
Students organize Sports Gala

Military College of Engineering (MCE) held its sports gala from December 5 to 19, 2016. Students took part with great enthusiasm in as many as seventeen in-door and out-door sports, including Futsal, Cricket, Volleyball, Badminton, Table Tennis, Math Marathon, Tug of War, Call of Duty, Fifa 14, Ludo, Rang, Chess, Snooker, Basketball and Relay Race. Prize distribution ceremony was held on December 19, 2016. Colonel Jawad Anjum Ansari, Chief Instructor CEMS graced the occasion as chief guest. He lauded the efforts of organizers and participation of students in the event, and hoped to see such events happening in future.
Infrastructural Development work at MCE progressing at a fast pace

Over the past few months massive renovation and rebuilding is ongoing at MCE both of infrastructure and lab upgradation. A few of these include Administrative block, Anwar Auditorium, Civil Engineering Wing’s Hall of Studies and postgraduate block, Combat Engineering Wing, Military Engineering Services (MES) School, MCE Mosque, Technical Cadet’s hostel and sixty four new BOQs. Counter IED Explosives & Munition School (CEMS), IED Awareness Hall, CEMS seminar hall and MCE mosque have also been renovated to give the campus a modern look. Some of these projects are already complete and the remaining are expected to be completed by the end of this year.

(Pictures from Usama)

Key Projects Undertaken by MCE:

| Geotechnical Design and Investigation of Kurram Tangi Dam | Lahore-Islamabad Motorway (M-2) Project |
| Slope Stabilization in collaboration with NHA | Swat Motorway Project |
| FATA Development Project | Lahore-Sialkot Motorway Project |
| Hyderabad-Sukkur Motorway (M-6) Project | Improvement of Asphalt Mix Design Technology for Pakistan in collaboration with NHA |

Lab upgrade of Survey and Geo-informatics department

Survey and Geo-informatics department acquired new equipment in June 2017, to bring in the latest technology at MCE. The newly obtained equipment includes DJI Phantom Pro 4 Aerial Imaging Platform, G170-V VTOL Quadplane, Stonex R2 Total Station, and Stonex S9 GNSS DGPS.

DJI Phantom Pro 4 Aerial Imaging Platform is a professional aerial imaging platform fixed with 20 megapixel HD camera for image capturing and real-time video coverage. It has a flying time of 30 min and the maximum altitude it can attain is 500 meters.

G170-V VTOL Quadplane is also a professional remote sensing and stereo imaging Vertical Take-Off and Landing (VTOL) fixed wing QuadPlane UAV. G170-V covers large areas while remotely sensing data, e.g. within 20 min it covers an area of 25 ha in 100 m above ground level delivering with its 20 megapixel RGB-camera a stunning GSD of close to 4 cm.

Stonex R2 Total Station is also a high-precision survey equipment using Real Time Kinematic (RTK) satellite naviga-
tion enhance the precision of position data derived from satellite-based positioning systems (global navigation satellite systems, GNSS). Acquiring this equipment has improved the department as it will be used to teach Advanced Survey courses for remotely sensing the surface and aerial surveying.

Establishment of Building Information Modelling (BIM) Laboratory

Establishment of a BIM Laboratory at MCE is in progress. Rivet and BIM soft wares have replaced AutoCAD. These soft wares will be taught to all the UG courses from Fall-2017 onward, in Civil Engineering Drawing (CE-181), Construction Project Management (CE-371) and Computer Aided Civil Engineering Design & Graphics (CE-388).

MCE opens doors to its newly renovated auditorium

Anwaar Auditorium at Military College of Engineering was recently renovated to give it a new interior and ambience. The sound system was upgraded and new pro-cinema sound system was installed. The auditorium is used by students for lectures, seminars and convocation. In addition to that a fortnightly movie show is held for students and families. Recently a puppet and magic show was also held for the children of Risalpur Cantt. MCE wants to play its role in bringing entertainment to the families in addition to its usual academic tasks.
Seminars, Conferences and Workshops

Training on Disaster Risk Reduction and Adaptation to Climate Change conducted by Dr Naeem Shahzad

Dr. Naeem Shahzad, Assistant Professor and Head of Department Disaster Management at Military College of Engineering, NUST was nominated by Mangroves for the Future (MFF) Programme, IUCN, Pakistan for International Training of Instructors on Ecosystem-based Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) held in Thailand. As a consequent to this training, Dr. Shahzad was invited by MFF Pakistan in May 2017 to widely disseminate the knowledge and learning for the benefit of coastal stakeholders and MFF grantees. In this regard, MFF organized a training workshop and seminar titled ‘Eco-Disaster Risk Reduction and Ecosystem-based Adaptation to Climate Change’ on 24 and 25 May, 2017, respectively. The training workshop was attended by 19 participants representing government, academia and CBOs from coastal areas of Sindh and Baluchistan, while the seminar held on May 25, 2017 was attended by more than 60 participants including students and faculty members of HEI/HEJ/International Center for Chemical and Biological Sciences (ICCBS), University of Karachi and the government and civil society representatives.

MCE faculty participates in formulating Fire and Life Safety Provisions for building codes of Pakistan

Pakistan Engineering Council (PEC) and NDMA initiated the task of “Formulating the Fire and Life Safety Provisions for Building Code of Pakistan” in October 2015. A task force comprising of experts and stakeholders was formulated by PEC. Brigadier Dr Shahid Iqbal (Ex CI/ Dean) and Lieutenant Colonel Dr Muhammad Maqbool Sadiq (HoD Structures) of Military College of Engineering, Risalpur Cantonment, were selected as members of this Task Force due to their expertise in the area. They worked day and night to formulate the first ever Fire and Life Safety Provisions for Building Code of Pakistan based on international codes but well adapted to local conditions. This gigantic task was accomplished in short period of about eight months. After necessary approvals and vetting, these Fire and Life Safety Provisions have been implemented duly supported by Law. A grand launching ceremony was arranged at The President’s House on February 27, 2017 in which the Fire Safety Task Force members were recognized for their efforts.

Effective implementation of these provisions by the concerned authorities would most likely and substantially reduce fire related risks to human life and property. Formulation of these Fire Safety Codes is a significant achievement and an important milestone in the history of the Country’s efforts towards achieving the objective of Disaster Resilient Pakistan.
Dr Zahoor gets the best project award of OSCH

Dr Hafiz Zahoor Ahmad Khan was awarded the ‘Best Project Award’ of Occupational Safety & Health Council (OSHC) for his outstanding research project ‘Investigating the Relationship between Safety Climate and Safety Performance in the Construction of Multi-storey Buildings in Pakistan’ on December 9, 2016 in Hong Kong.

Faculty and students attend Laajverd Visiting School, Hunza

Faculty member of Disaster Management Department Lec. Somana Riaz along with two PG students Sidra Tabsassum and Mayram Asghar attended a two weeks summer visiting school from July 1st to July 14th, 2017 at Gojal Valley, Hunza. Laajverd visiting school provides a dynamic environment for students and researchers to have firsthand experience of working in areas that are vulnerable to natural hazards. Researchers from different fields and educational backgrounds worked with indigenous communities and local organizations. They worked rigorously in field to carryout interdisciplinary research to highlight the challenges faced by the community. The two weeks field visit included detailed analysis of three villages of Gojal valley i.e. Gulmit, Ghulkin and Hussaini. The theme for 2017 Laajverd Visiting School was ‘Mapping Resilience’ and it focused on disasters, indigenous practices and mountain economies. The concluding session comprised of project presentations that were designed by students as an outcome of their research conducted in field. The research opportunity provided training for senior students for their MS research projects and encouraged them in producing quality research.

Faculty participates in international conference on Infrastructure Engineering

Two faculty members from MCE, Dr Anwaar Ahmad and Dr Muhammad Irfan attended the Fifth International Conference on Infrastructure Engineering in Developing Countries held on July 14 and 15, 2017 at the NED University of Engineering and Technology, Karachi with experts suggesting various techniques on how to build reliable structures and address future challenges of sustainable development. The conference was organized by the university’s Department of Urban and Infrastructure Engineering in collaboration with the Institution of Engineers Pakistan. Giving a presentation on sustainability issues in infrastructure planning, design and construction Prof Nasir Shafiq, the keynote speaker serving as director at the Sustainable Resources Mission Oriented Research, Universiti Technology Petronas, Malaysia, said that the pace of world migration towards urban centres had dramatically increased, though quality and volume of infrastructure in
many developing countries remained inferior. Other topics covered during the proceedings included urban mass transit, integrating structural evaluation of highways in overall pavement management system using non-destructive testing, traffic congestion and its impact on traffic flow in Hyderabad and need assessment of sustainable urban growth. Prof Abdul Sattar Shakir, Prof Afzal Ahmed, Prof Adnan Qadir, Dr Mohammad Irfan and Prof Abdul Sami Qureshi also spoke at the conference.

**Guest Lectures and Talks**

**MD Habib Rafiq (Pvt) Limited give a talk on the emerging needs of the Construction Industry**

Mr. Habib Ahmed, Managing Director of Habib Rafiq (private) Limited delivered a lecture on ‘Construction Industry Emerging Needs’ on November 23, 2016 at MCE. Students and faculty attended the lecture and took keen interest in knowing about his experiences. Similarly a seminar on ‘Construction Project Management with Hands on Practice of Primavera Software’ by Maj Dr Sohail Anwar was held on Dec 24, 2016 at MCE.

**UAO and ILO office NUST holds Alumni talk series**

University Advancement Office and Industry Liaison Office NUST conducted an Open Talk session for students of MCE and CAE on April 27, 2017. Speakers were invited from various organizations to share their experiences about the industry and job search process. The speakers included, Mr Khalid Khan, Vice President of Shaheen International Airlines and a graduate from College of Aeronautical Engineering; Mr Zohair Fazil, Deputy Chief Planning Commission, an MCE graduate; Ms Sarah Shahid Dir Business Planning and Analysis, Telenor, an NBS graduate; Mr Jibran Hashmi, CEO ENCON Grunelngenieur Pvt Ltd an MCE graduate and Mr Afzal Malik, CEO USEN and former director Pakistan Dragon Wave Incl an MCS graduate. The speakers addressed 3rd and 4th year students from MCE and CAE. They spoke of their experiences and about job market in general. They guided the students about job search. There was a long question answer session at the end in which the students asked questions.
Students attend lecture on the working of UN Cluster System

On April 21st, 2017 a lecture was arranged for the students of MS Disaster Management. The guest speaker was Mr. Majid Afridi, UN Food Security Cluster Coordinator for KPK and FATA. He apprised the students of the working of UN cluster system in disasters in Pakistan. Co-led by the World Food Programme (WFP) and the Food and Agriculture Organization of the United Nations (FAO), the global Food Security Cluster (gFSC) is committed to saving lives through the coordination of appropriate, efficient and well-resourced food security responses in major emergencies. The gFSC was created in 2010 and has over forty partners including NGOs, donors and UN agencies, with the International Committee of the Red Cross (ICRC) as an observer. It provides support to twentyseven countries. A Strategic Advisory Group comprised of members of the co-lead agencies and NGOs governs the work of the global cluster, which is largely focused on ensuring that country-level operations are well staffed and equipped to respond to food security crises. The gFSC team is on call to provide immediate surge support in case of a humanitarian crisis as well as regular assistance as needed at the country level. The students found the lecture very useful in context of Pakistan and were quite excited to learn about working of UN cluster in real time situations.

SAO arranges lectures by renowned civil engineers

Several talks by professional and accomplished civil engineers were held at MCE for the benefit of the students throughout the Spring semester. These were a significant source of knowledge that MCE students gain in addition to their classroom studies. These lectures included ‘Water Resource Management in Pakistan’ by Dr Hassan Abbass, HoD Civil Engineering at Swedish College of Technology on February 23, 2017; ‘Reinforced Concrete Structural Systems’ by Dr Wasim Khaliq, Assistant Director Design, Housing directorate at GHQ, Rawalpindi on March 9, 2017; ‘Dynamics of Energy security and economic development’ by Lt Col (Retd) Dr Gulfraz Ahmad Khan former Secretary in the Ministry of Petroleum and Natural Resources on March 22, 2017; ‘An Introduction to Nano Physics by Dr Majid Khan, Asst Professor Abdu Wali Khan University, Mardan on April 13, 2017; ‘Application of Graph Theory in Civil Engineering’ by Dr Muradul Islam Khan, Assistant Professor University of Haripur, KPK on April 20, 2017; ‘Design philosophy and concepts’ by Dr M Shahid Siddique, Asst Professor MCE on April 27, 2017; and ‘New Experiences in Geo technical Engineering in Pakistan’ by Engr Sohail Kibria on May 11, 2017.

Deputy Director CDC holds a workshop on Resume Writing & Interviewing skills

Ms Atiya Zulfiqar, Deputy Director Career Development Center at NUST conducted a Resume Writing and Interviewing Skills workshop on January 6, 2017. Students from 3rd and final year attended the workshop and learned the techniques. The talk was followed by a question answer session and students were given valuable advice.