JOINING INSTRUCTION FOR ORIENTATION COURSE FOR AEs/JEs

TRAINING INSTRS

Gen

1. On behalf of the Commandant and all ranks of College of Military Engineering (CME), we extend a warm welcome to you for attending course at the College. CME is loc in the city of Pune (State of Maharashtra).

2. CME is a premier Category 'A' Establishment responsible for imparting training to officers and JEs / JCOs / OR of Corps of Engineers, selected personnel from CPO, PMF, Civil agencies and Friendly Foreign Countries. The Course will be conducted at the Soil Engineering & Material Testing (SEMT) Wing CME Pune. A brief on CME is at Annexure-I.

CONDUCT OF COURSE

3. Aim. To familiarize AEs / JEs who are associated with runway works on aspects relating to pavement materials, testing, quality control, evaluation, design, maintenance & rehabilitation of runways.

4. Scope. The training will be conducted at this Wing. The students will be trained on pavement evaluation techniques and testing the quality of materials used for repair and maintenance of pavements. Students shall be exposed to various aspects through a site visit at the end of the course.

5. OR incl Medical Category. AEs / JEs involved on runway works must be in requisite med cat as per SAO 6/5/89. Documents to be carried are at Annexure-II to V.

6. Duration / Block Syllabus. Block syllabus including duration of course is at Annexure-VI.

7. Method of Instruction.
   (a) Lecture and presentations
   (b) Tutorials and discussions
   (c) Laboratory work
   (d) Site visit

8. Study Material. The students are required to carryout preparation on the course as recommended readings appended in Annexure-VII.

9. Working Hours. On working days, classes are conducted from 0815 to 1400h. The timings may extend to evening hrs as per requirement. Students will maintain punctuality and will be seated in the class five min prior to the commencement of the class.
ADM INSTR

Reception

10. It is required to intimate the date and time of your arrival by AWAN / telegram to SEMT Wing, CME Pune-31, so that arrangements can be made for accommodation and transport. Tele No of SEMT Wg is 020-27144753 (Fax No 020-27148842). Considering the limited transport resources in CME, it is not practically possible to provide vehicle for each student on arr. Hence, common transport may be provided to a group of students.

11. CME bus regularly leaves for Pune Railway station at 1530 hrs and returns from Pune Rly Station at 1700 hrs for CME. This facility may be availed by the students reaching Pune Station. ETA may be fwd as per format at Annexure-VIII. In case you arrive without intimating your ETA, you may reach CME under your own arrangements. On arrival in CME, all are required to reg to the reception Centre, which is in the East Wing Mess, from where you would be taken to the allotted accommodation. Army Tele No of RXN Centre is 5056.

Accommodation

12. Details are given below:-

(a) **Officers.**
   (i) Transient single officer's accommodation has been done up to excellent standards.
   (ii) Single officer's transient accommodation will be allotted to all officers undergoing short courses (less than six months). Tariff for transient accommodation are from Rs.1150/- to Rs.1350/- per day.
   (iii) Officers are not permitted to make their own arrangements within CME Campus or Pune city with friends and relatives for their stay. Only the officers who are posted to local units in Pune or those who have a house in Pune. In such cases, application duly recommended by the CO/Head of Dte will be fwd to the Wing well in advance. Format of the same is at Annexure-IX. Under no circumstances lady guests will be entertained inside CME Campus.
   (iv) Officers are not permitted to bring family to the station without prior approval.

(b) **Subordinates.**
   (i) Accommodation will be provided to students as per their rank / designation. Students are not permitted to make their own arrangement within CME Campus or Pune city with friends and relatives for their stay. Under no circumstances lady guests will be entertained inside CME Campus.
   (ii) Students may be asked to stay in hotels as per their entitlement of TD allowance. They would be required to pay the hotel charges on their own on culmination of the course and claim the same later.

Transport

13. Transport, other than for official visit and tours, is NOT provided to students attending courses in CME. For the first two days of the course, bus / mini bus will be provided for move from Mess to class room and back. For balance period, bus can be arranged on payment of Rs.150/- per student. However, students may bring their own vehicle at their own expense. In the event of hiring / possessing a two wheeler, it is mandatory to wear crash helmet while riding the same. The pillion rider, if any, will also be required to wear a crash helmet. It may be noted that two wheelers and four wheelers are not allowed in the College on Wed & Sat when only cycles are to be used. Cycles can be hired locally.
Messing

14. **Officers / Subordinates.** Students are required to dine in the respective messes. Please note that the Mess Bill is required to be paid by online Net Banking / Credit / Debit cards only.

Claims

15. Claims for the course will be initiated by respective units after termination of course.

Sahayaks/Servants

16. Under no circumstance students will bring their sahayaks to the college. If brought, they will be returned to units immediately.

Dress Code

17. Dress for classes in CME is as under, students should be in possession of these dresses:-

(a) **Service Officers.**

(i) Mon, Tue, & Thu - Dress No 4 for army personnel

(ii) Wed & Sat - Trouser & Shirt with Tie

(iii) Fri - Combat Dress

(b) **Civilian Officer.** Trouser & Shirt with Tie on all days.

(c) **Subordinate Staff.**

(a) Service - Combat

(b) Civilian - Shirt & Pant

Lye

18. As a matter of policy, no leave is granted during the course.
1. In 1934, the first Indian Engineer officers (after training at the Royal Military Academy, Woolwich) were given instruction in Military Engineering at the School of Military Engineering, Chatham. After World War-II, it became evident that centralised training of officers and other ranks of the Corps was essential. Therefore, it became necessary to find a home for the School of Military Engineering. The School started functioning in Thomason College, Roorkee during November 1943. After careful consideration, to cater for its expansion, the present site at Pune was selected. By end 1947, the School of Military Engineering started moving to its new location at Pune and completed the move by mid 1948.

2. In November 1951, in view of the increased responsibilities and training facilities provided at the School, it was decided to change its name to 'College of Military Engineering', in keeping with the higher status of the Degree Engineering Courses and recognition by the Institution of Engineers (India). Work on permanent construction commenced in 1948 and most of the accommodation was completed by 1958. Rapid expansion of the College took place after 1963 to cater for the increased intake necessitated by the expansion of the Army.

3. Alma Mater of all Engineer Officers, CME is one of the Category 'A' establishments of the Army, under the Army Training Command (ARTRAC). CME has a role encompassing training, advisory, projects and research and experimentation for the Combat Engineers, Military Engineering Service, Border Roads Organisation and Survey. The training is conducted for personnel of the Corps of Engineers, other Arms and Services, Navy, Air Force, Para Military Forces, the police and civilians.

4. 'Soil Engineering and Material Testing Wing' is a prestigious technical organisation of Corps of Engineers of Indian Army. It is responsible for undertaking field soil investigations, airfield pavement evaluations and testing of civil engineering materials for ascertaining their suitability for construction projects. The wing has well established laboratories and functions as Central Test House of Corps of Engineers with role and duties as given below -

   (a) To carry out sub soil investigations in the field and laboratory tests on samples collected with a view to analyse the data so obtained and to make suggestions towards developing designs of pavements of roads and airfields.

   (b) Runway evaluation.

   (c) To carry out investigation and development work and suggest modifications to existing techniques in civil engineering practices.

   (d) To carry out routine and other tests on engineering materials used in projects with a view to assessing their suitability.

   (e) To assist the College of Military Engineering in conducting courses in soil/pavement engineering and material testing.

   (f) To carry out user trials on civil engineering materials to assess their suitability before introduction into Corps of Engineers.
# PERSONAL DETAILS OF STUDENT

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<td>Date of Commission / Seniority</td>
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CERTIFICATE OF UNDERTAKING BY THE OFFICER / SUBORDINATE

1. IC.................Rk....................Name.................................................................

Unit.......................... am willing to attend ...........................................(Name of Course) Serial No ........................................ Commencing from............... to ............ at ........................................ (Name of Institution) despite being a permanent LMC (SHAPE Factor) for ........................................ (disability).

2. I undertake that I will neither claim liability nor any compensation either against the administrative or the medical authority if any aggravation in my medical condition occurs due to schedule course.

Place: ....................................................................................

Date: ....................................................................................

(Sign of the individual)

COUNTERSIGNED BY OC / CO
MED CERTIFICATE OF PRESENT STATUS OF DISABILITY

1. It is certified that IC .............. Rk .............. Name .............. Unit .............. is in med cat .............. for the disability .............. and the disability at present is stabilised.

2. The last med bd in respect of the Officer was held on and the next med bd is due on ..............

3. The Officer is unfit to take part in PPT Tests.

4. A copy to Appx F to A0/1/2004/DGMS in respect of the last med bd proceedings is enclosed with this certificate.

Place : .............. (Sign of the RMO/AMC Specialist)

Date ..............

(Office Seal)
MED FITNESS CERTIFICATE

1. Certified that No .............. Rk .............. Name..........................................................
   Unit ................................ has been detailed to attend Course Ser No..........................
   commencing at CME, Pune. w.e.f.................. to ..........................................

2. His present med cat is SHAPE-1. (NOTE: OBESITY factor may please be specifically checked).

3. He is free from infectious and contagious disease.

4. The Officer has been examined by me and found FIT / UNFIT to proceed on above mentioned course.

5. It is confirmed that NO (NO) med bd proceeding concerning the Officer is awaited from higher HQ after approval / confirmation.

6. The Officer is medically fit to attend PPT Tests (2.4 km run).

Station: _____________________  (Signature of Med Officer)
Date: ___________________
Annexure-VI  
(Refer to Para 6 of Draft Joining instrs)

**BLOCK SYLLABUS ORIENTATION TRAINING OF AEs/JEs ON RUNWAY WORKS**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Theory</th>
<th>Practical</th>
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<tbody>
<tr>
<td>Introduction &amp; opening address</td>
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<tr>
<td>Geotech Investigation for Runways works</td>
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<tr>
<td>Lab Testing of Soil</td>
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<tr>
<td>Importance &amp; Method of sampling of construction material</td>
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<td>Desirable properties &amp; Tests on construction material</td>
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<tr>
<td>Lab Testing of Construction material</td>
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<tr>
<td>Intro to Rigid Pavements</td>
<td>1</td>
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<tr>
<td>Concrete Mix Design Procedure</td>
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<td>Method of construction of Rigid Pavements incl Quality Control</td>
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<td>Testing of concrete in Lab</td>
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<tr>
<td>Intro to Flexible Pavements</td>
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<tr>
<td>Lab Testing of construction material in flexible pavements</td>
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<td>Marshall method of Job mix formula for Flexible Pavements</td>
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<td>Method of construction of flexible pavements incl quality control</td>
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<tr>
<td>Panel discussion &amp; Case studies</td>
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<tr>
<td>Functional &amp; Structural Evaluation of Runways, Demo on Fl Eqpt</td>
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<td>Defects in Rigid &amp; flexible pavements - Causes &amp; suggested remedial measures</td>
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<td>Adm Formalities &amp; closing address</td>
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<td><strong>TOTAL</strong></td>
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The duration of course is 06 days.
RECOMMENDED BOOKS / REFERENCES

The following kits is recommended for studies:

CONCRETE LAB

IS 383-2016: Coarse and fine Aggregate for Concrete specification.
IS 4031 (Part 1,2,3,4,5,6) — Methods of physical test for hydraulic cement.
IS : 3535 - Methods of testing hydraulic cement.
IS : 2430 - Methods for sampling of aggregates for concrete.
IS : 1199 - Methods of sampling and analysis of concrete.
IS 2386 (Part 1,3,4) : Methods of test for Aggregates for Concrete.
IS : 1489 (Part 1) - Portland pozzalana cement — specifications (fly ash based).
IS : 1786 - High strength deformed steel bars & wires for concrete reinforcement — specifications.
(Reaffirmed 2013 with Amendment 1,2,3)
IRC : SP 49-2014 : Guidelines for use of dry lean concrete as sub base for Rigid pavement.
E-n-C's Branch Technical Instruction 10/11 : specifications for concrete Airfield pavements.
IS : 10262-2019 : Guidelines for Concrete Mix Design proportioning.
MORTH (5th Revision) specification for Road & Bridge works.
**Recommended Books** - Concrete Technology basic by M S Shetty,
Concrete Technology book by M L Gambhir.

BITUMEN LAB

Asphalt Institute Manual MS-2, ASTM D-1559, D-2726, D-1188, D-2172. 2041
E-n-C's Branch Technical Instruction TI-9/2018, MORTH : Fifth Revision
**Recommended Books** - HP Hand Book, Bituminous Road Construction in India by Prithivi Singh Kandhal.

SOIL LAB

IS : 2720 Pt 1 to Pt 40 - Method of Test for Soil.
IS : 1498 - Classification and Identification of Soil for general Engg.
IRC : 37-2018 – Guidelines for Design of Flexible pavement
**Recommended Book** - Soil Mechanics and foundation – by Dr. B C Punmia,
Ashok Kumar Jain & Arun Kumar Jain.

CHEMISTRY LAB

IS : 4032, IS:269-2015, IS : 2386 (Part II, V, VII), IS : 3025 & IS 456,
IS : 712, IS : 2720 (Part-21,22,26,27), IS : 8887
**Recommended Books** - Inorganic Chemistry by Prof G S Manku,
Organic Chemistry by Prof I L Finar.
DETAILS OF ETA

1. Personal Details
   (a) No .................................................................
   (b) Rk & Name .....................................................
   (c) Unit ..................................................................
   (d) Whether accompanied by family or single: ..............
   (e) Mode of travel ...................................................

2. Date and time of arr............................................... 

3. Details of Train if applicable ...................................

4. Meals required on ..................................................