

**KARNATAKA GERMAN MULTISKILL DEVELOPMENT CENTER  
(KGMSDC) BANGALORE**

**In Association with**

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI.  
(VTU)**

**OFFERS**

**Post Graduate Certificate Program in IT & Networking Engineering  
(Effective from the Academic year 2024-25)**

**PGCPNE  
AT**



**Karnataka German Technical Training Institute  
KGTI, KALABURAGI**

**PROSPECTUS  
2024-25**

Karnataka German Technical Training Institute,  
Near Chandrashekar Patil Stadium, Behind Judicial Officer's Quarters, Rajapur Road,  
Kalaburagi –585103

## 1. About KGMSDC and VTU

The KARNATAKA-GERMAN MULTI SKILL DEVELOPMENT CENTRE (KGMSDC), an autonomous registered society established by the Government of Karnataka with technical support from German International Services (GIZ InS), has set up KARNATAKA GERMAN TECHNICAL TRAINING INSTITUTES (KGTTIs) in Bengaluru, Kalaburagi, Belagavi, Mangaluru, Hubballi, Mysuru, and extension centres in Gouribidanur and Karkala. The KGTTIs aim is to provide comprehensive vocational Training across various industrial technical fields.

The primary Mission of KGTTI is to provide broad based multidisciplinary world class Training programs in various technical fields, directed towards development of specialized skill in alignment with the industry requirements across the Globe.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY VTU is one of the leading technological universities in India. Established in 1998, VTU has played a pivotal role in transforming the educational landscape. Managed by a dedicated team, VTU focuses on outcome-based education, industry-institute interactions, and digital transformation. It offers a wide range of Undergraduate and Postgraduate programs across affiliated colleges, emphasizing both conventional and non-conventional energy resources. VTU's central placement system ensures that students receive quality education and job opportunities. Additionally, VTU promotes entrepreneurial leadership through its incubation centres and equips graduates with the skills needed for positions in both public and private sectors. Both organizations have collaborated to offer a postgraduate certificate program at KGTTI centres.

KGMSDC, KGTTI-Kalaburagi in association with VISVESVARAYA TECHNOLOGICAL UNIVERSITY (VTU) is offering 'Post Graduate Certificate Program in IT & Networking Engineering'.

## 2. The course coverage

**Computer Hardware and Software:** This course covers computer hardware and software details, including advanced concepts such as security and networking. Students will learn to describe internal components, assemble computer systems, install operating systems, and troubleshoot using diagnostic tools.

**Networking Skills:** Students completing the course will be able to connect to the Internet, share resources in a networked environment, and apply decision-making techniques to resolve networking issues. They'll also gain expertise in configuring switches, routers, and improving network performance and security

**System Administration:** The curriculum introduces key command-line concepts and enterprise-level tools. Students delve deeper into Linux administration, covering file systems, logical volumes, selinux, firewalling, and troubleshooting.

**Advanced Network Servers:** The final course focuses on deploying and managing network servers, including DNS, Mariadb, Apache HTTPD, Postfix SMTP, NFS, SMB, iSCSI, and advanced networking configurations. Bash shell scripting is used for automation and troubleshooting.

**Cloud Computing:** Students develop cloud skills through an overview of concepts, core services, security, and architecture. The course prepares them for the AWS Certified Cloud Practitioner certification, emphasizing distributed system design and implementation.

## 3. Certification:

On successful completion of the Course, internship, Project work, passing the Internal assessments conducted by KGMSDC and End semester exams in association with VTU; Post Graduate certificate program in IT & networking engineering marks card and the PG certificate is awarded jointly by Visvesvaraya Technological University and KGMSDC Society.

## 4. Facilities available at KGTTI

Karnataka German Technical Training Institute (KGTTI) is equipped with state-of-the-art facilities for in-house Training and production.

Laboratories are equipped with latest imported and indigenous machines and equipment's. The following facilities are available at the Institute.

<ul style="list-style-type: none"> <li>➤ Information Technology Lab for course on CISCO, CCNA, REDHAT LINUX &amp; AWS</li> <li>➤ Campus is Wi-Fi enabled and Connected to the Internet through fibre optics.</li> <li>➤ CAD-CAM and CNC Simulation Lab.</li> <li>➤ Computer Systems connected in network with</li> <li>➤ Local server and advanced switches and routers.</li> <li>➤ Well-equipped electrical lab comprising of motors, pumps, EMT, Schneider Electric Lab, Solar Generator and latest LUCAS-NULLE Technology</li> </ul>	<ul style="list-style-type: none"> <li>➤ Conventional Machine workshop</li> <li>➤ Modern Smart Classrooms and teaching aids.</li> <li>➤ CNC Lathe</li> <li>➤ CNC 3 axis Milling machine</li> <li>➤ CNC Simulator</li> <li>➤ 3D Printer</li> <li>➤ Plastic Injection moulding machine</li> <li>➤ Heat Treatment Equipment</li> <li>➤ Latest inverter technology welding machines</li> <li>➤ Advanced Welding Labs</li> <li>➤ Library</li> <li>➤ Girls and Boys Hostel Kitchen and dining hall</li> </ul>
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## 5. Duration of the Course

The duration of the course is 1 year divided into 2 semesters (content is shifted to point 12).

## 6. Entry Qualifications and Eligibility Criteria

- 6.1. Graduation from any University in Science, Computer Science, Information Technology, Computer Applications, Cloud Computing, Engineering and Technology. With at least 50%

marks for General candidates and 45% marks for SC/ST and OBC candidates

- 6.2. Candidate should not be studying in any other course or undergoing any other course at the time of admission.
- 6.3. Differently abled candidates should be able to work with both hands failing which he/she will not be eligible for admission.

## 7. How to apply

- 7.1. The application/registration form in the proforma attached herewith should be used in original. The application should be filled in by the candidate in his own handwriting and sent by post or submitted with photocopies of all the certificates mentioned below to **The Director, Karnataka German Technical Training Institute, Near Chandrashekar Patil Stadium, Behind Judicial (Judge) Officer's Quarters, Rajapur Road, Kalaburagi – 585103**. Application form submitted should have the superscription on the top of the envelop as **“Application for Post Graduate Certificate Program in IT & Networking Engineering”**.
- 7.2. Documents to be submitted at the time of admission.
  - a. Original Degree Marks Card, Degree Completion Certificate BCA/B.Sc IT/BE/ B.Tech or Equivalent.
  - b. Photocopy of Study certificate in Karnataka for claiming reservations.
  - c. Photocopy of SSLC / 10th MARKS CARD
  - d. Photocopy of All the Reservation Certificates with RD Number /Caste (Category, Income, Hyderabad-Karnataka (HK) Certificates.) Which ever you want to claim.
  - e. Photocopy of 12th / 2nd PUC MARKS CARD
  - f. Photocopy of Aadhaar card
  - g. Candidate Latest Passport size photograph 04 copies.

## 8. Number of Seats

- Intake capacity for **Post Graduate Certificate Program in IT & Networking Engineering** for the year shall be as per the norms of VTU and displayed at the institute. The distribution of the seats would be as per Government/AICTE norms.
- The institute reserves the right to fill the unfilled seats in a particular category with the students of other category from the waiting list.

## 9. Method of Selection

- The seat will be allotted as per the entrance test/ merit list and seat allotted for the course at the time of counselling shall be final. Counselling for the candidates will be conducted at KGTTI Kalaburagi.

## 10.Course Fees.

- The students admitted to the course shall pay course fee as prescribed by the institute. The fee should be paid at the beginning of each semester as per the notification from the KGTTI.
- Late fee charges would be applicable on defaulters as per the rules of the institute.
- The fee may be revised by the competent authority from time to time. Please refer to the fee structure provided along with this prospectus.

## 11.Security Deposit

The selected candidates will have to make a Security Deposit of Rs.5000/- (*suggested 10,000*) at the time of admission in addition to the fee. This deposit shall be refundable on completion of course after deduction of any dues to the institute without any interest. In case, a student leaves the course in between, the above deposit will be forfeited.

## **12. Commencement of course**

The exact date of commencement of the course shall be notified to the candidates. No student shall normally be allowed to join late. Under exceptional circumstances, however, Director may allow student(s) to join late. The period of delay shall not be compensated by any extra period of course. However, the student(s) shall put in extra efforts to make up for the time loss.

## **13. Scheme of teaching and examinations**

The subject details for the course, theory as well as practical is given below and follow Choice Based Credit System (CBCS) and Outcome-Based Education (OBE)

## 14.FIRST SEMESTER

Sl. No.	Course Category	Course Code No.	Course Title	Hours per week			Total contact hours /week	Examination				Credits
				L-Theory	T-Tutorial	P-Practical / Skill development activities		Duration in hours	CIE Marks	SEE Marks	Total Marks	
1.	Mandatory course first semester	IP101	Induction Program Two weeks	8 days intensive			40	-	-	-	-	0
2.	Program Core courses	PC101	Computer System Infrastructure	2	1	0	3	3	50	50	100	3
3.	Program Core courses	PC102	Computer Networking	3	1	0	4	3	50	50	100	4
4.	Program Core courses	PC103	Network programming languages	1	1	0	2	3	50	50	100	2



5.	Program Core courses	PC104	Computer System Infrastructure Practical's	0	0	4	4	3	50	50	100	2
6.	Program Core courses	PC105	Computer Networking Practical's	0	0	4	4	3	50	50	100	2
7.	Program Core courses	PC106	Network programming languages Practical's	0	0	4	4	3	50	50	100	2
8.	Internship	SI101	Internship (2 weeks) after I Semester	0	0	2	2	3	100	--	100	1
9.	Major Project:	PR101	Major Project: Network Design and establishment of network	0	0	8	8	3	100	--	100	4
10	Audit	AU102	Environmental Science	2	0	0	1	3	50	50	100	0
11	Audit	AU102	Essence of Indian Knowledge and Tradition	2	0	0	1	3	50	50	100	0
Total									1000		20	

**Note:**

1. **Induction Program** is Mandatory
2. **Project with Seminar:** This may be hands-on practice, survey report, data collection and analysis, coding, mobile app development, field visit and report preparation, modeling of system, simulation, analyzing and authenticating, case studies, etc.

3. Continues internal evaluation (CIE) marks shall be awarded by a committee comprising of HoD as Chairman, Guide/co-guide, if any, and a senior faculty of the department. Students can present the seminar based on the completed mini-project. Participation in the seminar by all postgraduate students of the program shall be mandatory.
4. The CIE marks awarded for Mini-Project work and Seminar, shall be based on the evaluation of Mini Project work and Report, Presentation skill and performance in Question-and-Answer session in the ratio 50:25:25. Mini-Project with Seminar shall be considered for passing and shall be considered for award of PGCPNE Certificate. Those, who do not take-up/complete the Mini Project and Seminar shall be declared as fail in that course and have to complete the same during the subsequent semester.
5. **Internship:** All the students shall have to undergo a mandatory internship of **02 weeks**. Those, who do not take-up/complete the internship shall be declared as fail.
6. The Audit Ability Enhancement Course carries no credit. However, a pass on such a course is mandatory for the award of the Certificate.
7. Skill development activities: Under Skill development activities, the students should
  - a. Interact with industry (small, medium, and large).
  - b. Involve in research/testing/projects to understand their problems and help creative and innovative methods to solve the problem.
  - c. Involve in case studies and field visits/ fieldwork.
  - d. Accustom to the use of standards/codes etc., to narrow the gap between academia and industry.
  - e. Handle advanced system's to enhance technical talent.
  - f. Work on different software/s (tools) to simulate, analyze and authenticate the output to interpret and conclude.

## 15.SECOND SEMESTER

Sl. No.	Course Category	Course Code No.	Course Title	Hours per week			Total contact hours /week	Examination				Credits
				L-Theory	T-Tutorial	P-Practical / Skill development activities		Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	Program Core courses	PC201	Linux System administration	2	1	0	3	3	50	50	100	3
2	Program Core courses	PC202	Computer Wireless Networking Technology	2	1	0	3	3	50	50	100	3
3	Program Core courses	PC203	Cloud Computing Technology	2	1	0	3	3	50	50	100	3
4	Program Core courses	PC204	Linux System administration Practicals	0	0	4	4	3	50	50	100	2
5	Program Core courses	PC205	Computer Wireless Networking Technology	0	0	4	4	3	50	50	100	2

			Practicals									
6	Program Core courses	PC206	Cloud Computing Technology Practical	0	0	4	4	3	50	50	100	2
7	Major Project:	PR201	Major Project: Design and Establishment of Network	0	0	10	10		100	--	100	5
8	Seminar II	SE201	Seminar II	0	0	2	2		100	--	100	1
9	Audit	AU201	Indian Constitution	2	0	0	2	3	50	50	100	0
10	Audit	AU202	Entrepreneurship and Start-ups	3	1	0	4	3	50	50	100	0
Total									1000			21

**Note:**

- 1. Project Work:** The project work shall be carried out individually. However, if the project requires more participants, then a group consisting of not more than five shall be permitted.
- Students in consultation with the guide/co-guide (if any) shall pursue a literature survey and complete the preliminary requirements of the selected Project work. Each student shall prepare a relevant introductory project document and present a seminar.
- CIE marks shall be awarded by a committee comprising of HoD as Chairman, all Guide/s and co-guide/s (if any) and a senior faculty of the concerned departments. The CIE marks awarded for project work shall be based on the

evaluation of Project Report, Project Presentation skill, and performance in the Question and Answer session in the ratio of 50:25:25.

**4. Societal Project:** Students in consultation with the internal guide as well as with external guide (much preferable) shall involve in applying technology to workout/proposing viable solutions for societal problems.

**5.** Those, who have not pursued /completed the Societal Project, shall be declared as fail in the course and have to complete the same during subsequent semester/s after satisfying the Societal Project requirements. **Total Credits 41**

## 16.Evaluation Scheme:

For Theory Courses:

Weightage:

- The weightage of internal assessment is 50%
- The weightage of End Semester Exam is 50%
- The student has to obtain at least 50% marks individually **both in** internal assessment and end semester exams to pass.

Basis of Evaluation:

- Internal assessment: Total of best two out of three Internal assessment test conducted on syllabus covered during the period through assignment on multiple choice, true/false, matching, short answer questions with test duration of one hour each: 25x2=50 marks, pass marks 25
- Semester End examination: (covering entire syllabus) through combination of essay, descriptive, explanatory, problem solving, case study type of questions; conducted for three hours duration for 100 marks with weightage 50 %= 50 marks. Pass marks 25
- Evaluation report will be prepared for 100 marks each for all theory subject/course.
- Total of all the courses will be recorded.

## 17.For Practical Courses:

Weightage:

- Weekly assessment 25%
- The weightage of mid semester test is 25%
- The weightage of end semester practical Exam is 50%
- The student has to obtain at least 50% marks individually both in internal assessment and end semester exams to pass.
- Basis of Evaluation:

**Every course will have the following pattern of assessments.**

- Weekly assessment of quality of work, methods followed documentation and report submissions, punctuality and attitude, average of all weekly assessments. 25 marks
- Mid semester practical test: Planning, scheduling of the process (Written), Quality of work, output and Results. 25 marks
- End semester Examination: Planning, scheduling of the process (Written), Quality of work, output and Results. 50 marks
- Evaluation report will be prepared for 100 marks each for all practical course
- Total of all the practical courses will be recorded.

## **18.For Internship / Projects / Seminar etc.**

Weightage:

- The weightage of internal assessment is 50%
- The weightage of End Semester Project report/seminar presentation is 50%
- The student has to obtain at least 50% marks individually both in internal assessment and end semester project report/seminar presentation to pass.

Basis of Evaluation:

- Work done 30 marks
- Quality of project report 30
- Performance in project Presentation 20 marks
- Performance in viva-voce 20 marks

## **19.Mapping of Marks to Grades**

- Each course (Theory/Practical) is to be assigned 100 marks, irrespective of the number of credits, and the mapping of marks to grades may be done as per the following table:

- Letter Grade: It is an index of the performance of students in a said Course. Grades are denoted by letter grade O, A+, A, B, B+, C and F.
- Grade Point (GP): Refers to a numerical weightage allotted to each letter grade on a 10-point Scale.

## 20. Letter Grade and corresponding Grade Points on a typical 10 – Point scale, and % of Marks secured relationship

Range of Marks %	Letter Grade		Grade Point
90-100	O	Outstanding	10
80-89	A+	Excellent	9
70-79	A	Very Good	8
60-69	B+	Good	7
55-59	B	Average	6
50-54	C	Pass	5
0-49	F	Fail	0

- If a student remains absent for Semester end examination (SEE) of any of the course/s, the letter grade assigned to that course shall be F.
- Passing Standards: Refers to passing a Course only when getting GP greater than or equal to 5 (Grade letter C)
- A student who obtains any grade O to C shall be considered as passed and if a student secures F grade in any of the course of passing, he/she has to reappear in that course for the SEE.
- A student shall be declared successful at the end of the Programme for the award of PGCPNE Certificate only on obtaining CGPA  $\geq 5.00$ , with none of the Courses remaining with an F Grade.



## **21.Attendance**

The candidate has to put in a minimum attendance of 80% in each course to qualify for SEE.

**Code of conduct for the students at institute and Hostel premises must be followed as per the guidelines issued.**