Army Institute Of Technology (AIT), Dighi Camp, Pune - 15.
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Recognised by AICTE and DTE Maharashtra and affiliated to Savitrabai Phule Pune University

ONWARD TO GLORY

Criterion 6- Governance, Leadership and Management

6.2 Strategy Development and Deployment

6.2.1 – The institutional perspective plan is effectively deployed and functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup,appointment, service rules, and procedures, etc.

a. **The institutional Strategic/ perspective plan is effectively deployed**

Strategy Deployment

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ASCON : 35538
E-Mail : dircolleges.aweshq@awesindia.edu.in
collegessection.aweshq@awesindia.edu.in

Army Welfare Education Society(AWES)
Building No 202, Shankar Vihar
Delhi Cantonment
New Delhi-110010

B/45840/BOG/AWES

18 Nov 2022

HQ Southern Comd (AWES)
HQ Eastern Comd (AWES)
HQ Western Comd (AWES)

ACAD GROWTH OF AWES PROFESSIONAL COLLEGES / INSTTS IN SHORT TERM

1. The Chairman, Exec Cmte of AWES BoG (AG) has accorded 'In Principal Approval' to Acad Growth Plan for AWES Professional Colleges / Instts. The same has also been presented to the President of AWES BoG (COAS) on 29 Oct 2022.

2. Colleges / Instts be requested to fwd S of C / Proposals, incl approx estimates of HR and infra reqmts, funds needed and their source, timelines, revenue model in long-term perspective and other relevant aspects. As IPA of the Chairman Exec Cmte of AWES BoG (AG) has already been accorded to Phased Acad Growth Plan, the S of C / Proposals should now be processed on mgt chs essentially for the purpose of obtaining apvl of the Competent Auth to hire Consultancy Services for prep of Detailed Project Report (DPR).

3. The Phased Acad Growth Plan (2025-26) is at Appx 'A' and Tentative Long-Term Perspective Plan (2026-40) is as given at Appx 'B'. All concerned are requested to undertake relevant activities e.g. Brainstroming, Ideation, Conceptualisation wrt Long-Term Perspective Plan.

4. Pl accord 'PRIORITY'.

Himmat

(Himmat Singh)
Col (Retd)
Director Colleges
for Managing Director

Encls : As above.

Copy to :-

List 'D' & 'E'

Internal

Project Sec
S, L&F Sec

Appx 'A'
(Refers to Para 3 of HQ AWES Letter No B/45840/BoG/AWES dt 18 Nov 2022)

PHASED ACAD GROWTH PLAN : AWES PROFESSIONAL COLLEGES / INSTTS IN SHORT TERM (2025-26)

Ser No	Instt	Acad Expansion	Year	Funds Reqd	Remarks
Phase-I					
1.	AIT	Intro Skill Devp Cert Courses.	2023-24	Nil	₹ 978.65 Lakh from Instt (472 for Acad Growth, 450 for Hostel and 55.65 for addl HR reqmt).
		Intro BE (AI and ML) - 60 and BE (Auto and Robotics) – 60.	2023-25		
		Intro BE (Cyber Security) – 60.	2025-26 and beyond		
		Intro 5 Yr Integrated ME (VLSI & Embodied Sys) – 24.			
2.	AIL	Ongoing incr in intake - from 100 to 120 (incl 40 x B.Com LLB).	2023-24	Nil	Reqd fund already avlb with instt.
		Intro 3 Yr B.Com and 3 Yr LLB - 50 each.	2024-25	₹ 200 Lakh from AWES as soft loan.	Day-boarding.
3.	AIMT	Intro One Yr PG Diploma (Data Analytics) – 60.	2023-24	₹ 50 Lakh from AWES as soft loan.	Day-boarding to offset reqmt of adm infra.
		Incr MBA intake (Business / Data Analytics, ML and AI) from 120 to 180.			
		Incr BBA (BFSI and Exports) intake from 60 to 120.	2024-25		
4.	AIMK	Intro 3 Yr BBA – 60.	2023-24	₹100 Lakh from AWES as soft loan.	AICTE apvl obtained. Day boarding only.
		Intro PGDM.			
5.	AIHM&CT	Intro 4 x Diploma Courses (1 ½ Yr) - 25 each.	2023-24	Nil	Optimisation of infra and day-boarding to be factored.
6.	ACN	Incr B.Sc (Nur) intake from 60 to 100.	2024-25	₹ 365 Lakh from AWES as soft loan.	₹ 365 Lakh (bal 50%) from College.
		Intro M.Sc (Nur) with intake of 30 students.		Nil	₹ 10 Lakh from College Fund (40-50% Day-boarding).
7.	ACMS	Incr MBBS 100 to 150.	2025-26	Nil	₹ 1700 Lakh from College.
		Incr MBBS 150 to 200.			
Phase-II					
8.	AIFD	Intro 3 Yr B Voc - 60.	2023-24	₹ 400 Lakh from AWES as soft loan.	Day-boarding Model (No Hostel infra).
		Intro 3 Yr B Voc (Jewellery Design).	2025-26		
9.	ALC	Intro 5 Yr Integrated UG Pgme.	2024-25	₹ 4035 Lakh (Land and Renovation) from AWES as soft loan.	Day-boarding Model.

Contd …2/-

Ser No	Instt	Acad Expansion	Year	Funds Reqd	Remarks
10.	AIN	Incr B.Sc (Nur) Course from 50 to 70.	2024-25	Nil	Only after constr of new Campus.
11.	ACDS	Incr BDS Course - from 40 to 50.	2024-25	Nil	₹ 35 Lakh from College Fund (Based on outcome of current admissions).
		Est of Multidisciplinary Instt of Higher Edn (MIHE)**	**2024-25**	**-**	**Conceptualisation stg.**
12.	AIE	Intro new UG Course BA (H) Eco / Eng – 60.	2024-25	₹ 50 Lakh from AWES as soft loan.	Day-boarding / PG Model.
Total				**₹ 52 Cr**	**₹ 31 Cr**

Appx 'B'
(Refers to Para 3 of HQ AWES Letter No B/45840/BoG/AWES dt 18 Nov 2022)

ACAD GROWTH PLAN : AWES PROFESSIONAL COLLEGES / INSTTS IN LONG TERM (2026-40)

1. Devp of Edn Instts (Engineering College / Skill Oriented Edn) at Barwala** (10 Acre) @ cost of approx ₹ 100 Cr.

2. Acqn of Addl Land (14.83 Acre) at Kanhe for est MIHE @ cost of approx ₹ 65 Cr.

3. Est of Six MIHE as under :-

   (a) **Western Comd**. Chandimandir (Study in prog).

   (b) **Southern Comd**. Kanhe, Sec'bad (Study in prog) and Bengaluru.

   (c) **Eastern Comd**. Kolkata.

   (d) **Central Comd**. Greater Noida.

**Study in prog.

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Army Institute of Technology
Alandi Road, Dighi Hills
Pune – 411015

AIT/0023/AWES Expn/Adm

19 Oct 2022

HQ Southern Command (Sigs)
PIN – 908541
C/o 56 APO

ACAD GROWTH PLAN REPORT : AIT

1. Ref your letter No 444315/Sigs/AIT dated 27 Sep 2022.

2. The Academic Growth Plan proposal has been reviewed based on directions by Patron during pn on 14 Dec 2022 and directions during GBM held on 23 Sep 2022 on the subject.

3. Due to forthcoming implementation of the NEP, rapid changes in technologies, the environment of Higher Education, is likely to remain fluid. In view of the above it is recommended that the plan be reviewed every two years for possible course corrections. However, for developing necessary infrastructure; advance "in principle approvals" of BoA and HQ AWES will be required.

4. For necessary action please.

(Abhay A Bhat)
Brig (Retd)
Director

Encl : As stated

Copy to :-

HQ Southern Command (AWES)
Pune - 411001

ARMY INSTITUTE OF TECHNOLOGY

ACADEMIC GROWTH PLAN

Reference

(a) HQ AWES letter No B/45840/Min/AWES dt 25 Mar 2022, Collegiate meet with AG dt 08 Feb 2022 (Sr No (8))

(b) MoM of AG's Annual Conf held on 09 and 10 Mar 2022

(c) HQ AWES letter No B/45840/Dir Conf/AWES dt 16 Mar 2022, Priority follow-up action on AG's Annual Conf held on 09 and 10 Mar 2022 (Ser No 2(c))

INTRODUCTION

Background

1. AIT was established in 1994, with initial intake of 180. Three programs (Comp, Mech and E&TC), of Bachelor of Engineering, all had intakes of 60. AIT expanded horizontally by adding IT Program in 2001 with the intake of 60 and increasing the intake in Computer stream to 120 in 2016 and of E & TC to 120 in AY 2020. AIT also attempted for vertical growth by introducing PG in Design Engineering (Mech Dept) from 2015-16. It is also already obtained approval for starting ME Program in Data Science with the intake of 24 from academic year 2022-23.

2. The primary objective of AWES is to provide quality education at affordable cost to the wards of Army Personnel. AIT fulfils this objective and also ensures excellent career opportunities for its students. Based on the success of current programs various road maps for future growth evolved post 2013 (ref to growth plan 2013-23). A five-year vision document was issued duly approved by HQ Southern Command in 2019 (13 May 2019). Some of the proposals have as part of growth plan have been implemented and some of the proposals were shelved due to change in market dynamics as well as lack of adequate support from wards of Army Personnel. Post the recent COVID Pandemic and the churn in industry demand, as well as subsequent to issue of comprehensive Higher Education Policy NEP 2020 by the government, there is a requirement of rethink on these road maps and as also detailed deliberations with all stake holders and HQ AWES.

Decisions Taken During AGs Conference and Reasons Thereof

3. During the AG's Conference, collegiate meetings were held between the Heads of Higher Education Institutions of AWES and functionaries at HQ AWES. During these deliberations it immerged that AWES higher education foot print is extremely low (approx. 3000 students in 12 HEIs) as compared to the strength of Army wards appearing in 12th standard/ other qualifying examinations each year. This strength could be up to 1 lakh. It was felt that the intake of students in AWES HEIs needs to be increased substantially to provide good career opportunities to the wards.

4. **Guidelines in NEP**. The Higher Education scenario in India too has changed in last few years. Govt has come out with a comprehensive and revolutionary National Education Policy. The Main thrust of this policy regarding higher education is to end the fragmentation of higher education, by transforming higher education institutions into large multidisciplinary universities, colleges, and HEI clusters/ Knowledge Hubs, each of which aims to have **3,000 or more students**. This would help build vibrant communities of scholars and peers, break down harmful silos, enable students to become well – rounded across disciplines including artistic, creative, and analytic subjects as well as sports, develop active research communities across disciplines including cross - disciplinary research, and increase resource efficiency, both material and human, across higher education. Considering the fact that AIT is already the largest, oldest and most sought after HEI of AWES, AIT needs to take the lead amongst AWES institutions.

5. During the deliberation it emerged that AIT is the most preferred Institute as it has demand to intake ratio consistently of around 1:10, has excellent placement record of its students and has the capability to introduce industry 4.0 technology courses in near future. It also has adequate infrastructure and human resources to be able to carry out such expansion.

6. AIT had prepared a tentative Academic Growth Plan covering short term (upto 2024) and medium term proposals (upto 2028). This plan was approved in principle and following decisions in this respect were accorded.

(a) AIT to prepare comprehensive plan of action to increase intake to 500+ in next 2-3 years. Detailed proposal including manpower and infrastructure to be processed at the earliest (refer Para 26 (a) of Minutes of AG's Conference).

(b) Revision of PE if required and increase construction of additional 3 stories of hostel to be linked and dovetailed along with the proposal of Academic Growth Plan (ref Para 14 (b) & (c)).

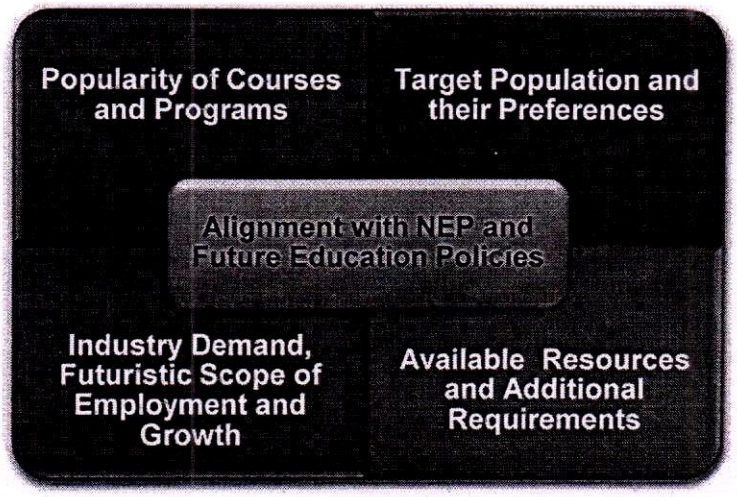
7. Based on the above decisions a comprehensive Academic Growth Plan is now being submitted.

AIM

8. To propose a comprehensive academic growth plan for AIT, with the aim to double the AIT intake in next 2-3 years, while maintaining the quality and effectiveness of Higher Education.

DETAILED PROPOSAL

Factors to be Considered for Increase Intake Or Staring New UG/ PG Program



9. **Popularity of Course and Program**. Market is ruled by technology and creating the new jobs opportunities in upcoming fields like AI & ML, Data Science, VLSI, Electrical Vehicles and robotics. The companies are looking for trained and skilled talents. Keeping this in mind institution needs to start relevant courses.

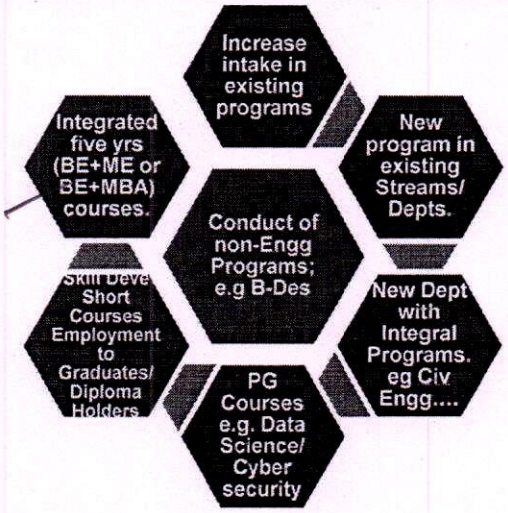
10. **Target Population and Their Preferences**. Engineering is one of the preferred course in India and across globe. This field has ensured job security in the population. Students and parents are keen to take up courses related to market demands and accordingly students are choosing the popular courses.

11. **Industry Demand, Futuristic Scope of Employment and Growth**. Industry is forced to change and adapt new technologies because of global market scenario and demand. Many ventures and start-ups are looking young talents pool. Digital transformation has forced many industries to change for keeping the pace with technology. IoT is one of the essential part and parcel of automation process to yield better output, which required skilled manpower and is not available. Cyber security is one of most demanded field and India is particularly looking for experts in this domain. It is said that data is one of the important treasure and skilled manpower create wonder out of it. This one of the promising area and institute needs to start courses in this field. Each and every industry expecting day one ready manpower and cut down cost or man hours on training. Expectation from organization is that the required skills and knowledge is imparted in regular education only. If institute meets such demand by adapting and imparting required skill set during the course work, employability enhances multiply times along with handsome salary packages.

12. **Available Resources and Additional Requirements**. At present AIT is having intake of 360. Its current real estate has the capacity to handle additional 180 – 200 student at UG and PG level. Developing classrooms and labs in existing building will be help in utilizing the existing setup to its fullest extent.

13. **Alignment with NEP and Future Education Policies**. AIT is one of the premier institution in India and well established self-financial engineering college. As per NEP policy such institutes need to grow into "Higher Educational, multi-disciplinary hubs with minimum 3000 students. For this purpose, AIT needs to grow both horizontally and vertically. It should also integrate institutes like ALC Kanhe, dwell into multidisciplinary areas to meet the requirements of NEP-2020.

Various Options for Horizontal and vertical Growth of AIT



14. **Increase in Intake in Existing programs.** AIT has 120 intakes each in its Comp and E&TC UG programs. Based on choices of the students, it is seen that Comp Engg remains the most popular program followed by Information Technology, while E&TC is the third most popular program. Based on our survey, there may not be much additional demand for E&TC program in near future, as also adequate industry uptake. There is a scope for increasing intake of IT program and in addition, there is likelihood of higher demand for engineers pre-trained in industry 4.0 skills; which include

(a) Artificial Intelligence / Machine learning.

(b) IoT.

(c) Electrical Vehicle.

(d) Robotics and automation

(e) Cyber Security.

(f) Automotive Electronics.

(g) Data Science

15. **New Programs in Existing Departments/ Stream**. At present Dept of Information Technology is having the 60 intake and has the appetite to absorb additional intake of 60 for optimal utilization of existing infrastructure with few additional classrooms/ labs. Trend towards Mechanical engineering is declining and there is a need to make them attractive by starting program related to automation and robotics/ Mechatronics/ Electrical Vehicle/ Green Energy or Automotive Electronics.

16. **Establish a New Department and Start New Core Program**. As an engineering college AIT does not cover the entire spectrum of engineering. Important core engineering branches such as Civil, Electrical and Chemical have not been established in AIT since its inception. In AITs growth plan start of Civil/ Electrical engineering course was proposed, but the current demand by industry (wrt salary offered and popularity) has prevented us not to start such courses in AIT. Moreover, establishing such department will be extremely capital and space intensive.

17. **PG Courses and PhD Research Centre in Existing Streams**. For any technical institute of a reasonable stature, vertical growth is a very important facet. Activities related to research, development and innovation cannot gain momentum and maturity in absence of post graduate students and research fellow. Such courses can also help aspirations of some of the wards of army personnel, who want to pursue higher education in niche areas but could not get admissions in some of the reputed institutions.

18. R&D is one of the important aspect and plays vital role of countries development. All well-developed institute must also focus on research. All accreditation bodies, ranking agencies are giving very good weightages to this parameter and institution which are ranked in top are doing better and better in this field. Running PG program and research centre also help institutes to fetch research grants.

19. PG and PhD program will bring lot of quality publications and patents to institute. AIT must have at least one PG program and start research centre in each department. In world QS ranking outcome of research has given lot of importance and weightage. If AWES expect AIT to be globally recognized, institute need give attention on R&D aspect and need to start PG as well as research program. Small step towards this is that AIT applied for PG program in Data Science in computer engineering. Recent announcement by Govt. of India to be leader in the domain of Semiconductor can be fulfilled by starting PG program in VLSI and Embedded specialization by dept of E&TC. This is being planned and E&TC. In AIT growth plan start of research centre is projected.

20. **Short Duration Certificate Courses.** Every technical institution possesses adequate infrastructure and human resource to run short term, job oriented skill courses. To run such courses institute, need not to create additional infrastructure and existing facilities can be utilised after class hours and on Saturday and Sundays. Such courses will help enhancing the industry required skill of Army wards and will be able to fetch better salary. Such short term courses do not require any approval from AICTE/ DTE/ University. Infact this courses will help institute to earn additional revenue. As these courses can be designed base on specific requirement of industry. So agile approach will upskill the manpower and helps in supplying the required manpower to market. For

running courses tie-up with well-known expert/ organization/ alumni is required. Such kind of courses also helps our faculty and will help in updating the existing labs of Depts.

21. **Integrated ME/ MTech/ BE+MBA Courses**. This one of the option offered by few of institute/ universities. In this direction AIT can also pay attention. New options are to offer MBA degree after engineering graduation can be introduced, for example BE + MBA in Data analytics/Machine learning. Such composition helps the aspirant to get engineering and management degree in 5 years of duration. 5 years integrated PG program in engineering is still not much popular among young aspirants. But in future it may become popular if such necessity is demanded by industry particularly who required highly specialised pool in some particular niche areas. One of the problem is these courses is that student can leave course after 4 years.

22. **Starting Non Engineering Courses**. One of the popular programs like B Design or B Arch have a lot of demand in industry. Many educational groups have has started such programs. With introduction of such courses in AIT, we can plan for a **multi-disciplinary** approach and offering electives and credit subjects from a wider canvas. This would be in line with NEP guidelines. However, it is felt that introduction of such courses may be done after thorough deliberation and consultancy.

SELECTED OPTIONS: SHORT TERM ROADMAP (UPTO AY 2024-25)

Short Term Options UG Courses. (Till Academic Year 2024-25)

23. AIT proposes to start two courses by AY 2024-25, viz additional increment of 60 in BE (IT) and BE (Automation and Robotics/ Electrical Vehicles), with intake of 60 each. With introduction of these two programs, intake at UG level in AIT will increase to 480 by 2024. Details of these courses are given in succeeding paras.

24. **BE(IT).** Existing intake of IT branch is 60 and has the capacity to increase by another 60 seats. IT is the second most popular choice of the students currently. As such there is very little difference in the syllabus of IT vis a vis Comp Engg. IT course has higher emphasis on interaction of computer systems with real world requirements. Many new Industry 4.0 technologies fall under the ambit of this program which include Artificial Intelligence, Machine Learning, Augmented Reality / Virtual Reality, Cyber Physical Systems, Metaverse, Web Based Technologies etc. There is likely to be huge demand for such skills in near future. Introducing another division of BE(IT) will help in utilizing in present infrastructure optimally. Only, two additional labs, three class room and one tutorial will be required to cater the additional intake. It is proposed to start this course in AIT with additional intake of 60 from AY 2023-24. Details of faculty and non-teaching staff and the expenditure on their salaries is tabulated at **Appx 'A' & 'B'** respectively. Same is summarized below: -

(a) **Additional Infrastructure and Human Resources Required**. AIT has built substantial capacity in terms of high tech labs and networks over last few years, which will enable smooth delivery of such course. AIT also has trained faculty in these subjects and deficiency if any can be met by recruiting locally. Three class

rooms, three labs and two tutorial rooms are required next three years, which can be easily constructed in same academic block.

(b) **Infrastructure Cost**. Details are given at **Appx 'C'.**

25. **BE (Robotics & Automation)/ BE (Electric Vehicles).** AIT has explored both these options as there is a lot of interest in the industry related to both these futuristic fields. However, as of now BE (Electric Vehicles) course is not approved by SPPU, though it is available in the list of courses of AICTE. As AIT as an affiliated college, it cannot apply for a course not listed by SPPU, introducing such course may be postponed. Hence, AIT should focus on BE (Robotics and Automation). It is an interdisciplinary course that deals with the design and development of robots and their use in areas of manufacturing, defense, marine, medical and service industries. It also covers areas of automation and autonomous transportation. The course is a mix of mathematics, science, mechanical engineering, electrical / electronic engineering, and Computer Science engineering. The graduates of this course can find jobs in private manufacturing & design companies, public organizations, military & defense, education, agriculture, healthcare, etc. They can work as Robotics Engineer, Robotics Designer & Analyst, Robotics Sales Engineer, Robotic Research Scientist, Autonomous vehicle engineer, autonomous systems engineer etc. Pune is a hub of automobile industry. In addition to this, Pune has famous R&D institute like ARAI. By closely collaborating with local automotive companies and R&D organizations, it will be possible explore real world opportunities for the students and graduates. It is proposed to start this course in AIT with intake of 60 from AY 2024-25. Details of additional infrastructure, HR and finances required is as follows: -

(a) **Additional Infrastructure and Human Resources Required**. At the time of commencement of the course (i.e AY 2024-25), only one addl classroom will be required. In AY (2025-26) i.e. second year since launch of this course, additional one classroom, one tutorial room, two labs and three staff rooms will be required. As per our projection this infrastructure can be created in existing Academic Block in addition to infrastructure required for BE (IT). However, future requirements post AY 2025-26 including one classroom, two labs and five staff rooms, will have to be created in the "new academic building" proposed subsequently in this document.–Details of infrastructure in existing building and new building are at **Appx 'C' and 'D'.**

(b) **Financial Requirements**. Details are included in **Appx 'C' and 'D'.**

Short Duration Certificate Courses

26. It is proposed to start certificate courses in AIT to assist skill enhancement of army wards, who are non-engineering graduates'/ diploma holders or even 12th pass candidates with aptitude and industry experience and who would like to enhance their skills for better jobs and careers. In addition, such courses will also aid AIT as an

additional revenue stream. These courses will involve hands on training and project based learning and aim at employability enhancement and early career excellence for participants. Reputed institutes like Govt College of Engineering and IITs conduct such courses in collaboration with Industry. These courses are having good response based on the reputation of collaborating agency. Some reputed organizations like CDAC can be approached for the same. Maratha Chamber of Commerce, Industries and Agriculture (MCCIA) is approached to find the demand for different courses and they also feel that above mentioned two courses have demand in terms of trained manpower in industries around Pune. AIT had identified at least 8-10 such skill based courses which included fields such as IoT, Business analytics, AI & ML, Data Security, 3D printing and AR/VR. However, considering the immediate industry demand and availability of resources with AIT, it is proposed to start two such course in immediate time frame as given in succeeding paras.

27. **Internet of Things (IoT)**. This is one of the emerging technologies which is going to drive most of the requirements of future industry automation, smart cities, smart homes etc. There is going to be huge requirement of manpower in this area. Hence it is proposed to start a course in IoT. Tentative details are as follows: -

(a)	Name of Course	:	Certificate course in Internet of Things
(b)	Industry Partner	:	CopperCloud IOTech Pvt Ltd
(c)	Course Duration	:	24 weeks or six months (100 to 120 Hrs) 24 weeks theory lectures and practical (2 hrs theory and 3 hrs practical in every week).
(d)	Batch Size	:	30 Seats,
(e)	Fees per student	:	Rs. 10,000/-
(f)	Expenses towards remuneration: Rs 1,60,000/-		
(g)	Income from this course: Rs 1,40,000/- per course		
(h)	Commencement	:	from Nov/ Dec 2022.
(j)	Infrastructure required:		Nil

28. **Certificate Course in Business Computing & Analytics**. Business analytics takes a data-driven approach to the world of business, using statistics and data modelling to develop new business insights. This blend of technology and business makes it an ideal study option for anyone with an interest in programming or working with big data. Typically, students will be trained in data analysis and business intelligence tools, so they're able to do things such as predictive modelling. This involves analysing data about a business's past performance to predict how it will perform in the future and make business decisions accordingly. For example, a chain of restaurants may use data to decide where to open their next branch. Similarly, there is huge demand of software professionals. Good programming skill is required with good understanding of various tools for business computing & analytics. Tentative details are as follows: -

(a)	Name of Course	:	Certificate course in Business Computing & Analytics.
(b)	Industry Partner	:	To be identified.
(c)	Course Duration	:	25 weeks or six months (300 hrs) (4 hrs theory and 8 hrs practical in every week).
(d)	Batch Size	:	30 Seats.
(e)	Fees per Student	:	Rs. 20,000/-
(f)	Expenses towards remuneration : Rs 4,10,000/-		
(g)	Income from this course :		Rs 1,90,000/-
(h)	Commencement	:	from Jan/ Feb 2023.
(j)	Infrastructure required :		Nil

SELECTED OPTIONS : MID TERM ROADMAP (UPTO AY 2027-28)

29. Some proposed options till AY 2027-28 are as follows :-

(a) ME (VLSI & Embedded System) – commencing 2025-26.

(b) PhD Research Centres in Computer & E & TC Depts (2026-27).

(c) Two new UG Courses wef AY 2027-28.

ME VLSI & Embedded Systems in E & TC Dept.

30. This is a two years regular ME course available in the list of approved courses of SPPU and AICTE. It is proposed to start with an intake of 24 wef AY 2025-26.

31. With fast developing Industry 4.0 technologies such as IoT, Electrical and Autonomous Vehicles, Robotics and Autonomous, there will be huge demand for VLSI & Embedded Systems experts to design and develop, chips, circuits, microcontrollers and other Systems on Chips, for such technologies. With the thrust on "Atmanirbhar Bharat", Make in India and indigenous defence manufacturing, such demand is likely to grow very fast in India, in near future. This is a niche field already in great demand in US and other developed countries.

32. During the discussion on academic Growth Plan, during AIT GBM (held on 23 Oct 2022) it was suggested that an integrated BE+ME program instead of a separate PG program (5-year duration, BE+ME) would be more popular and attractive for students. Students will not only save one year but also will not need to appear for separate GATE or equivalent exams before their admission to an ME / PG program. Such integrated programs with multi-disciplinary flavours can also be designed. Such proposal can be studied in detail and proposed separately.

33. **Infrastructure and Resources.** AIT already has well equipped labs in E & TC Dept. Some equipment augmentation will be required. An addl classroom (33 sqm) will be required which can be created in existing academic block. ME requires recruitment of addl Prof, Associate Prof and Assistant Prof. Details of year wise requirements is at **Appx A, B and C.**

Ph D in Computer and E & TC (AY 2026-27).

34. For any institute having a PhD research center is a matter of pride. Having such a centre also provides boost to research and innovation foot print as also provides, boost to rankings at national level. For a dept to have a Ph D Centre, it has to meet two criteria. Firstly, there should be a full time PG program in that dept/ stream and secondly at least two faculties should be University approved PhD guides. It is expected that with launch of ME (Data Science) in 2022-23, ME (VLSI/ Embedded Systems) in AY 2025-26, the PG course criterion will be full filled. E & TC stream already has four approved PhD guides in AIT, while it is expected that Comp Dept too will have two such guides by AY 2026-27.

35 It is hence proposed to start PhD research centres in these depts. Such research centres do not require addl infrastructure or any addl HR revenue outflow. On the other hand, the centre earns through annual fees of PhD candidates, which could be fixed between Rs. 80,000/- to Rs. 1.2 Lakh/ year, as per University norms.

New UG Courses.

36. It is proposed to start two additional divisions at UG level, by AY 2027-28. However commencement of these courses, will be dependent on completion of **new academic block and enhanced 'Hostel Infrastructure'**. These two UG divisions will add intake of another 120 thus taking the UG intake to over 600.

37. **BE (Artificial Intelligence and Machine Learning)**. Artificial Intelligence is considered to be the "technology of the century". It is often heard that AI is all set to replace a lot of jobs that humans do. On the other hand, it is also creating more than 130 million roles in all major sectors. Artificial Intelligence is one of the emerging technologies making its mark in every industry ranging from fashion to finance. In fact, AI jobs account for an average of 18% of jobs in most technology enabled companies. Though foundations of Computer Engineering are essential, this course prepares a student to specialise in applications of AI, Machine Learning (ML) and Deep Learning (DL). BE in (AI & ML) is an approved course in AICTE list and has been introduced by the BoS of SPPU. Many colleges and institutes under SPPU have started this course in last two years. Some of the institutes included Dr DY Patil College, Pimpri, Modern Engineering College, Pune. All these courses have received excellent response with more than 95 percent seats filled. AIT can consider starting this course after study of industry demand and overall popularity.

38. **Cyber Security and Forensics.** This is an extremely critical and emerging field. There will be much higher demand of such professionals in coming years, with introduction of IoT in every sphere of life, digitization of Governance and even in defence

sector. Many IITs, pvt colleges and specialized Universities like the Rashtriya Raksha University (RRU) and National Forensic Science University (NFSU) have started PG diploma/ PG, or integrated UG-PG courses in this field. BTech (Computer Science with specialization in Cyber Security) is also one such flavour. It is proposed to start one such division with intake of 60. As the course is currently not available in the list of UG courses with SPPU, further details cannot be given. However, it is expected that such course will soon be introduced by SPPU.

39 **Addl Infrastructure and Human Resources Required.** Standard "bricks" of labs, classrooms, staffrooms and HR resources, as per AICTE norms will need to be added as for other UG courses. Both courses proposed require computer based labs and hence require minimal investment in lab and testing eqpt. Details of HR resources infrastructure required are at **Appx 'B'** and **Appx 'D'.**

LONG TERM OPTIONS

40. Long term options i.e. proposed growth plan beyond 2028-29, are also discussed briefly and generically. These options are more aligned to NEP 2020 philosophy and designed to introduce more flexibility and opportunities for prospective students. In case infrastructure is available some of these may also be taken up before 2028. These options based on current popularity and future industry demand are given in succeeding paras.

41. **Integrated BE + ME or BE + MBA Courses, or Duel Degree Courses.** Many IITs, RRU and Pvt colleges such as VIT have introduced either integrated courses or "dual degree" courses. Such programs are gaining popularity and can compensate for lack of interest of students in conventional PG programs. Such programs offer many advantages as follows: -

(a) Being five years' programs (UG 3+PG 2), one year is clearly saved. Minimum required credits for UG are earned in 3 yrs only. This will also save educational expenditure for students.

(b) Students have flexibility and opportunity to undertake UG and PG programs in two independent but related disciplines. IIT Kanpur has many such interesting combinations BTech - MBA, BS (Bachelor in Science)- MTech, BTech- MS (Master of Science), BTech – MDES (Master of Designs) etc. For students who want to pursue the same specialization throughout, integrates BTech – MTech option is also available.

(c) Students acquire more versatility from long term career prospects.

(d) No need to appear for exams such as GATE prior to admission to PG.

(e) In case of tie up with foreign Universities, PG programs can be conducted abroad. SRM, VIT and some other reputed pvt universities have such tie ups with reputed foreign universities.

42. **Establishment of another Campus.** There could be an opportunity to est a wing of AIT, in another location/ campus, where similar Engg UG/ PG courses could be conducted. In case adequate land is acquired in AIL, Kanhe, such wing can be established at the earliest. This will also reduce pressure on AIT Campus and lead to introduction of multidisciplinary courses / contents.

43. **Non Engg Disciplines.** AIT may also strive to become a multidisciplinary education node by industry a few non-technical UG/ PG programs. As per current demand and availability of Teachers resources in Pune, programs in Architecture (B Arch) or Design (B Design) (which include Product Designs, Commercial Design, User Exposure Design etc), may be started in due course. This will develop a conducive interdisciplinary environment as desired in NEP 2020 policy.

44. With a view to start working on any of the "long Term Options", decisions need to be taken at the highest level in AWES. Any such implementation in existing AIT campus, will also mandate availability of a new academic block, which has been referred to earlier. Appx D contains approx. details of infrastructure required, assuming at least two new. divisions to be added as part of Long Term Plan. In case new campus / wing of AIT is established in a new location, exhaustive planning needs to be done for the same.

45. **Infrastructure Required.** The summary of infra required will be different at different time and will be dovetailed to increase as per growth plan. The reqd infra have to be constructed well before the start of new courses.

(a) **Short Term Infra Requirements.** The infrastructure required for short term growth plan will be constructed on existing buildings. This includes 05 Classrooms, 03 Tutorial Rooms, 08 Nos of Labs, 15 no of staff rooms and other administrative infra. The total area of Construction on existing building will be 1613 Sq mtr. The area available for future expansion is 1650 Sq mtr. The tentative cost of construction will be 4.72 Cr as on date. Speedy sanction will be required from CFA for start of construction. The cost of constr of hostel on existing Homi Bhabha Hostel will be Rs 4.50 Cr. The total cost for infra-structure incl hostel will be Rs 9.22 Cr i.e approx. Rs 10 Cr.

(b) **Mid Term Infra Requirements.** The Mid Term growth plan will require additional infrastructure and same is divided in two parts. The infrastructure which can be rehashing in existing infrastructure in Academic Block and the infrastructure required in New Academic Building. 02 class rooms will be constructed / adjusted in existing buildings. Remaining 02 class rooms, 03 Tutorial Rooms, 09 labs and 20 staff rooms will be constructed as part of new academic block. Extra Administrative areas like Common Room for Girls and Boys, Seminar Hall, Departmental Library, Adm Offices etc can be constructed in New Academic Building. The total area of Construction in New Academic Building will be 3000 Sq mtr.

(c) **Long Term Infra Requirements.** The long term plan for academic growth includes 03 Classroom, 02 Tutorial rooms, 07 Labs, 15 Staff Rooms can be constructed extension above New Academic Building. The total area of Construction extension above New Academic Building will be 1200 Sq mtr. The tentative cost of construction will be 4.20 Cr. This will become part of future expansion of newly constructed academic block or it can be constructed in one go as per availability of financial health at that time. The total cost of new academic block will be approx. Rs. 14.4 Cr. The detailed are given at Appx D.

FINANCIAL OUTLAY

46. Details of expenditures required each year upto FY 2029-30, based on short and medium term proposals, on HR augmentation as well as basic infrastructure development is given in Appces A to D. For working out such details for long Term options, clear decisions will be required to be taken separately. Financial Summary for Short Term and Medium term proposals is given in succeeding paras.

47. **Expenditures**. As summarized below:-

AY	Cost of Equipment in Rs. Lakh					Cost towards HR In Rs Lakh (6)	Cost of $ Infra In Rs. Lakh (7)	Total Amount in Rs Lakh (1+2+3+4+5+6+7) (8)
	IT (1)	Robotics and Automation/ EV (2)	VLSI & ESD (3)	Cyber security (4)	New UG Div/(AI& ML) (60 Intake) (5)			
2023-24	20					17.64	40.07	**77.71**
2024-25	19	20				56.65	136.41	**232.06**
2025-26	19	50	29			139.42	224.19	**461.61**
2026-27	19	50	19			207.58	451.60	**747.18**
2027-28		50		23	50	272.2	394.02	**789.22**
2028-29				22	50	344.8	195.86	**612.66**
2029-30				22	50	425.2	144.63	**641.83**
2030-31				22	50	509.6		**581.6**

$ will be spent from accumulated Development Fund

48. Income due to increased intake is summarized below:-.

AY	Student Strength (1)					Total No. of students (2)	Cumulative Students (3)	Fees per student in Rs. Lakh (4)	Total Income in Rs Lakh (5)=(3)x(4)
	IT	Mech	E&TC	Comp	New UG Div/(AI&ML) (60 Intake)				
2023-24	60					60	60	1.75	**105.00**
2024-25	120	60				180	180	1.84	**331.20**
2025-26	180	120	24			324	324	1.93	**625.32**
2026-27	240	180	48			468	468	2.03	**936.00**
2027-28		240		60	60	360	648	2.13	**1380.24**
2028-29				120	120	240	828	2.24	**1854.72**
2029-30				180	180	360	1068	2.35	**2509.80**
2030-31				240	240	480	1368	2.47	**3378.96**

Note: (i) Assuming Fees for every year will increase by 5% (Approx.)
(ii) Income from certificate courses are not considered
(iii) Expenses & Income of Short term courses are not considered in this table
(iv) Fees for UG and PG courses are considered as same

49. Income over Expenses summary based on details at paras 47 and 48 above is given below

AY	Total Income in Rs Lakh (from para 48) (1)	Total Expenditure in Rs Lakh (from para 47) (2)	Running Expenses in Rs Lakh (2) x 0.30 (3)	Income in Rs Lakh [1-(2+3)]
2023-24	105.00	77.71	23.32	**3.97**
2024-25	331.20	232.06	69.62	**29.52**
2025-26	625.32	461.61	134.95	**28.76**
2026-27	936.00	747.18	208.25	**-19.43**
2027-28	1380.24	789.22	292.99	**298.03**
2028-29	1854.72	612.66	183.74	**1058.32**
2029-30	2509.80	64.83	194.97	**2250.00**
2030-31	3378.96	581.6	174.47	**2622.89**

Note: Running expenses = 30% (Approx.) of total expenditure.
Expenses & income of Short term courses are not considered in this table

50. It is clear from the above table that growth plan is self-sustainable from financial point of view. In AY 2026-27 there is a sudden spike in expenditure due to construction of new academic block. While it is reflected to be expended based on revenue income, in actual practice portion of the investment in "Infrastructure Development Fund" will be utilized. Also as the intake further increases, this temporary shortfall gets covered up within a year (in other words the capital expenditure also will be recouped). The initial

requirements of Capital fund expdr of Rs 10 Cr for short term and Rs 15 Cr for Mid-term and long term can be met from existing FDs of Rs 61.27 Cr against College Fund. Infrastructure Development fund and hostel fund. It is proposed to expend Rs 10 Cr against Development fund and Rs 15 Cr from College fund after taking sanction from competent financial authorities. The FDs states of AIT are attached as Appx "E". It is submitted here that these funds will be recouped on similar level after higher collection from the students due to incr in intake in next seven years i.e. AY 2029-30.

RECOMMENDATIONS

51. The Academic Growth Plan as proposed in this proposal is sustainable financially even if the increase in fees for students is limited to only 5%. It will also help generate substantial additional revenue after 3-4 years for further expansion.

52. In the above calculations, revenue generated from certificate courses has not been taken into account as it will be trivial in longer scheme of things, unless the volume of such courses increases substantially.

53. All the courses chosen are based in industry demand and futuristic technology growth.

54. It is recommended that Academic Growth Plan as summarized as follows:

AY	UG/PG/PhD	Course	Intake
2023-24	UG	IT	60
2024-25	UG	Robotics & Automation/EV	60
2025-26	PG	VLSI & Embedded System	24
2027-28	UG	Cyber Security	60
	UG	New UG Division / AI & ML	60
	PhD	Computer and E&TC	NA

55 Planning for creation of infrastructure viz classrooms, labs, faculty room and hostel facilities (incl dinning/ kitchen expansion), will be required to put into motion immediately, considering 01 to 02 yrs of gestation period for plg and construction.

56. **Mid Term review of this plan will be carried out after every 2 yrs.**

File No. : AIT/0023/AWES Expn/Adm

Date : 19 Oct 2022

(Abhay A Bhat)
Brig (Retd)
Director, AIT

Appx 'A'

SUMMARY OF FACULTY AND STAFF REQUIRED

Academic Year	Staff Required	Nos required/ Dept					Total Numbers required	Cumulative Requirement
		IT	Robotics and Automation/ EV	VLSI & ESD	Cyber security	New UG Div/(AI&ML) (60 Intake)		
2023-24	Professor	00					00	00
	Asso Prof	00					00	00
	Asst. Prof	03					03	03
	Lab Asst	00					00	00
	Peon	01					01	01
2024-25	Professor	00	00				00	00
	Asso Prof	00	00				00	00
	Asst. Prof	03	03				06	09
	Lab Asst	02	00				02	02
	Admin Staff	01	00				01	02
2025-26	Professor	01	00	00			01	01
	Asso Prof	01	01	01			03	03
	Asst. Prof	02	02	01			05	14
	Lab Asst	02	02	01			05	07
	Peon	00	01	00			01	03
2026-27	Professor	00	00	01			01	02
	Asso Prof	01	01	00			02	05
	Asst. Prof	01	02	00			03	17
	Lab Asst	02	02	00			04	11
	Admin Staff	00	01	00			01	01
2027-28	Professor		01		00	00	01	03
	Asso Prof		00		00	00	00	05
	Asst. Prof		00		03	03	06	23
	Lab Asst		02		00	00	02	13
2028-29	Professor				00	00	00	03
	Asso Prof				01	01	02	07
	Asst. Prof				02	02	04	24
	Lab Asst				02	02	04	17
	Peon				01	01	02	05
2029-30	Professor				00	00	00	03
	Asso Prof				01	01	02	08
	Asst. Prof				02	02	04	26
	Lab Asst				02	02	04	19
	Admin Staff				01	01	02	03
2030-31	Professor				01	01	02	05
	Asso Prof				00	00	00	07
	Asst. Prof				02	02	04	28
	Lab Asst				02	02	04	21

Appx 'B'

EXPENSES ON FACULTY AND STAFF

AY	Staff Required	Nos Required/ Dept					Total No. reqd	Salary pm per staff in Rs	Total Salary in Lakh	Cost for AY in Lakh	Cumulative cost in Rs Lakh
		IT	Robotics, Automation/ EV	VLSI & ESD	Cyber security	New UG Div/(AI& ML) (60 Intake)					
2023-24	Professor	00					00	100000	00	17.64	**17.64**
	Asso Prof	00					00	80000	00		
	Asst. Prof	03					03	45000	16.2		
	Lab Asst	00					00	15000	00		
	Peon	01					01	12000	1.44		
2024-25	Professor	00	00				00	100000	00	37.6	37.6 + (17.64x1.08) = **56.65**
	Asso Prof	00	00				00	80000	00		
	Asst. Prof	03	03				06	45000	32.4		
	Lab Asst	02	00				02	15000	2.80		
	Admin Staff	01	00				01	20000	2.40		
2025-26	Professor	01	00	00			01	100000	12.00	78.24	78.24 + (56.65x1.08) = **139.42**
	Asso Prof	01	01	01			03	80000	28.80		
	Asst. Prof	02	02	01			05	45000	27.00		
	Lab Asst	02	02	01			05	15000	9.00		
	Peon	00	01	00			01	12000	1.44		
2026-27	Professor	00	00	01			01	100000	12.00	57	57 + (139.42x1.08) = **207.58**
	Asso Prof	01	01	00			02	80000	19.20		
	Asst. Prof	01	02	00			03	45000	16.20		
	Lab Asst	02	02	00			04	15000	7.20		
	Admin Staff	00	01	00			01	20000	2.40		
2027-28	Professor		01		00	00	01	100000	12.00	48	48 + (207.58x1.08) = **272.2**
	Asso Prof		00		00	00	00	80000	00		
	Asst. Prof		00		03	03	06	45000	32.4		
	Lab Asst		02		00	00	02	15000	3.60		
2028-29	Professor				00	00	00	100000	00	50.8	50.8+ (272.2x1.08) = 344.8
	Asso Prof				01	01	02	80000	19.2		
	Asst. Prof				02	02	04	45000	21.6		
	Lab Asst				02	02	04	15000	7.12		
	Peon				01	01	02	12000	2.88		
2029-30	Professor				00	00	00	100000	00	52.8	52.8+ (344.8x1.08) = **425.2**
	Asso Prof				01	01	02	80000	19.2		
	Asst. Prof				02	02	04	45000	21.6		
	Lab Asst				02	02	04	15000	7.2		
	Admin Staff				01	01	02	20000	2.40		
2030-31	Professor				01	01	02	100000	24	50.4	50.4+ (425.2x1.08) = **509.6**
	Asso Prof				00	00	00	80000	00		
	Asst. Prof				02	02	04	45000	19.2		
	Lab Asst				02	02	04	15000	7.2		

(aa) Professor : Rs 100000/- (ab) Assoc. Prof : Rs 80000/-
(ac) Asst Prof : Rs 45000/- (ad) Lab Asst : Rs 15000/-
(ae) Peon : Rs 12000/- (af) Admin Staff : Rs 20000/-

(ii) Salary for every year will increase by 3%.

(iii) Expenses of short term courses are not considered here.

INFRASTRUCTURE IN EXISTING BUILDING

Appx 'C'

AY	Name of Facility (Area Required/ Unit)	Dept IT	Dept Robotics, Automation / EV	Req Carpet Area (SqM)	Req Built Up Area as per AICTE (SqM)	Super Built Up Area as per Construction Practice (SqM)	Construction Rate per SqM (Incl of 7% inflation after two years)	Rate after addition for Furniture & Fixture/Lift & Electricals/Fire Fighting cost/External Services (25%) per SqM	Total Cost in Rs	Yearly Cost for Infrastructure in Rs
2023-24	Classroom (66 Sqm)	1		66	83	103	18000	22500	2320313	4007813
	Tutorial Room (33 Sqm)	1		33	41	52	18000	22500	1160156	
	Laboratory (66 Sqm)	0		0	0	0	18000	22500	0	
	Staff Room (05 Sqm)	3		15	19	23	18000	22500	527344	
2024-25	Classroom (66 Sqm)	1	1	132	165	206	18000	22500	4640625	13640625
	Tutorial Room (33 Sqm)	1	0	33	41	52	18000	22500	1160156	
	Laboratory (66 Sqm)	3	0	198	248	309	18000	22500	6960938	
	Staff Room (05 Sqm)	5	0	25	31	39	18000	22500	878906	
2025-26	Classroom (66 Sqm)	1	1	132	165	206	19260	24075	4965469	22419844
	Tutorial Room (33 Sqm)	0	1	33	41	52	19260	24075	1241367	
	Laboratory (66 Sqm)	0	2	132	165	206	19260	24075	4965469	
	Staff Room (05 Sqm)	4	3	35	44	55	19260	24075	1316602	
	Seminar Hall	0	1	264	330	413	19260	24075	9930938	
	Total			**834**	**1043**	**1303**				

Total Sum	**40068281**
Consultancy (3%)	**41270330**
Total Cost incl GST (18 %)	**48698989**
Total Cost in Cr	**4.86 Cr**

APPX "D"

INFRASTRUCTURE IN NEW ACADEMIC BUILDING

AY	Name of Facility / (Area Required/ Unit)	Dept: Robotics, Automation/ EV	Dept: VLSI & ESD	Dept: Cyber Security	New UG / (AI& ML)	Reqd Carpet Area (SqM)	Reqd Built Up Area as per AICTE (SqM)	Super Built Up Area as per Constr Practice (SqM)	Constr Rate per SqM (Incl of 7% inflation after two years)	Rate after addn for Furniture, Lift, Elec, FF, Ext Ser (25%)	Total Cost in Rs	Yearly Cost for Infrastructure in Rs
2026-27	Classroom (66 Sqm)	1	0	1	1	198	248	309.38	22000	27500	8507813	27328125 +17832032 (Expdr for Adm Area) = 45160157
	Tutorial Room (33 Sqm)	0	1	1	1	99	124	154.69	22000	27500	4253906	
	Laboratory (66 Sqm)	2	0	1	1	264	330	412.50	22000	27500	11343750	
	Staff Room (05 Sqm)	3	0	6	6	75	94	117.19	22000	27500	3222656	
2027-28	Classroom (66 Sqm)	0		1	1	132	165	206.25	22000	27500	5671875	21570313+ 17832032 (Expdr for Adm Area) =39402345
	Tutorial Room (33 Sqm)	0		1	1	66	83	103.13	22000	27500	2835938	
	Laboratory (66 Sqm)	0		2	2	264	330	412.50	22000	27500	11343750	
	Staff Room (05 Sqm)	2		3	3	40	50	62.50	22000	27500	1718750	

APPX "D" Contd.....

AY	Name of Facility (Area Required/ Unit)	Dept: Robotics, Automation/ EV	Dept: VLSI & ESD	Dept: Cyber Security	Dept: New UG/ (AI & ML)	Reqd Carpet Area (SqM)	Reqd Built Up Area as per AICTE (SqM)	Super Built Up Area as per Constr Practice (SqM)	Constr Rate per SqM (Incl of 7% inflation after two years)	Rate after addn for Furniture, Lift, Elec, FF, Ext Ser (25%)	Total Cost in Rs	Yearly Cost for Infrastructure in Rs
Extra Adm Area (Incl in AY 2026 to 2028)	Boys Common Room					150	188	234.38	22000	27500	6445313	35664063 (1783204 for AY 2026-27 and 2027-28)
	Seminar Hall					264	330	412.50	22000	27500	11343750	
	Dept Library					66	83	103.13	22000	27500	2835938	
	Adm Area (HOD Offc, Staff Room, Store etc)					200	250	312.50	22000	27500	8593750	
	Girls Common Room					150	188	234.38	22000	27500	6445313	
2028-29	Classroom (66 Sqm)			1	1	132	165	206.25	23540	29425	6068906	19586016
	Tutorial Room (33 Sqm)			0	0	0	0	0.00	23540	29425	0	
	Laboratory (66 Sqm)			2	2	264	330	412.50	23540	29425	12137813	
	Staff Room (05 Sqm)			3	3	30	38	46.88	23540	29425	1379297	
2029-30	Classroom (66 Sqm)			0	0	0	0	0.00	25188	31485	0	14463307
	Tutorial Room (33 Sqm)			0	0	0	0	0.00	25188	31485	0	
	Laboratory (66 Sqm)			2	2	264	330	412.50	25188	31485	12987459	
	Staff Room (05 Sqm)			3	3	30	38	46.88	25188	31485	1475848	
Total						**2688**		**4200**				

Area calculation formula = Total req Carpet area X 25% Built up Area X 25 % Super Built up Area

Total Sum	**118611823**
Consultancy (3%)	**122170177**
Total Cost incl GST (18 %)	**144160809**
Total Cost in Cr	**14.41 Cr**

ARMY INSTITUTE OF TECHNOLOGY GROWTH PLAN : 2013-2023

1. References:-

(a) Para 22 HQ AWES No B/45840/Placements/ AWES dated 24 Jul 2013 Minutes of Head of Institutes Meet 2013: AWES Colleges,

(b) Dir AWES HQ Southern Command email dated 21 Sep 2013 titled Five Year Plan,

(c) Existing AIT Perspective Plan 2011-20 vide AIT/0079/PPlan 2011-20/Adm dated 10 Dec 2011.

(d) Suggested Measures to Improve AIT Intake vide AIT/0916/ Merit/A Cell dt 28 Aug 2013.

PART I - INTRODUCTION

2. AIT had prepared a 10 year Perspective Plan 2011-20 based on directions from the previous AIT Patron-in-Chief on 09 Aug 2011 and the same was submitted on 10 Dec 2011. Proposed Growth Plan has been formulated by modifying the above-mentioned Perspective Plan based on directions from HQ AWES during MD's Conference in May 2013, further amplifications from Dir AWES HQ Southern Command on 21 Sep 2013 and suggested measures to Improve AIT Intake submitted to HQ Southern Comd for approval on 28 Aug 2013. A subcommittee was detailed to prepare this Growth Plan based on following guidelines:

(a) Build excellence in quality of education and administrative arrangements,

(b) Optimisation of existing AIT set-up,

(c) Realistic assessment of future needs and visualization of expansion plans accordingly,

(d) Need of additional infrastructure and funds,

(e) Need to build corpus and generate funds from AITs integral resources,

(f) Work out recurring maintenance expenditure.

3. **Composition of Subcommittee**. The Subcommittee consisted of the following members:

(a) Brig (Retd) SK Lahiri Director AIT

(b) Dr VP Gosavi Principal, AIT

(c) Dr BP Patil HOD E&TC

(d) Dr J Sankpal HOD Mech

(e) Dr Sangeeta Jadav HOD IT

(f) Dr S Marathe HOD ASGE
(g) Prof S Dhore HOD Comp
(h) Lt Col (Retd) S Karodpati
(g) Prof Manoj Khaladkar, TPO, AIT

4. **Stakeholder Expectations**. Stakeholders of AIT and their general expectations are as given below:-

(a) **Students:** Both immediate employment and long-term employability (including scope for doing MBA).
(b) **Parents**: Prosperous careers for their wards and Army Category 'A' Environment in AIT administration.
(c) **Employers**: Immediate application of Knowledge and Skills acquired – Productivity from Day 1.
(d) **Faculty**: Effective and disciplined learning by students and scope for career growth in AIT.
(e) **AICTE / Univ / NBA**: Academic Excellence and Research & Consultancy environment within laid down guidelines.
(f) **AWES**:

- Quality Education at Affordable Cost
- Self sustenance
- Maintenance of uniformity of AWES rules and regulations.

PART II - ENVIRONMENT SCAN AND SWOT ANALYSIS

5. **Internal Environment in AIT**. Before launching a SWOT analysis the Sub-committee examined the prevailing situation in AIT with the aim of drawing some deductions from each of these factors. A brief review of this analysis is given.

(a) **Admission Profile.** Only a handful of AITians are joining from the first 200 AIT merit holders, mainly due to doubling of the number of good government run IITs, NITs and IIITs with less than half our tuition fees. Besides, JEE Main cut-off merit of the last intake this year has gone down to 1,45,000 from 75,000 last year, partly due to some normalization problem of AICTE and primarily due to a large number of Army wards not even applying for AIT admissions because of perceived greener pastures elsewhere. It is true that JEE Main merit alone is not a true indicator of a student's actual merit as a large number (50 percent approximately) are clearing it with a preparatory gap period of one year or more, which allows them to achieve higher JEE Main merit but exhibit poor performance much below expectations after joining the engineering college. None-the-less, AIT's aim should be to remain attractive for all Army wards keen to follow engineering as a career. Hence it is imperative that following emergency measures be adopted to improve AIT intake:

- Give wide publicity for AIT in all Army establishments:
    - Forward AIT info brochure by email to principals of all APS and KVs,
    - Forward AIT write-up with DO from Chairman for publication in all Army journals, Sainik Samachar and for display in Info Room of all Army Centres,
    - Forward AIT write-up with DO from Chairman to Dept of Ex-servicemen Welfare (DESW) and Kendriya Sainik Boards for further dissemination to all Rajya Sainik Boards (32 Nos) and Zilla Sainik Boards (376 Nos).
- The fee structure should remain market friendly for wards of Army personnel, especially those of ex-servicemen.
- Bring about a culture of Zero Ragging in line with Court rulings so as to totally eliminate misgivings on this account amongst all prospective Army wards.
- Provide superior infrastructure and best facilities like horse-riding in Southern Command Riding School on Sundays, adventure treks on selected Sundays with cadets of CME, and swimming facilities in BEG and Centre etc.

(b) **Student Profile.** Present student profile based on their parentage is Officers – 18%, JCOs – 47% and OR – 35%.

- AIT must concentrate more on Soft Skills development of students.

(c) **Academic Excellence.** Presently, AIT final year results are one of the best in Pune University with more than 75% First Class in Final Yr. However, more than 10 percent are failures. We need to concentrate on the third year first sem results which decide campus placements. Approximately 40 percent are in first class and about 20% to 30% have ATKTs presently. Good companies do not entertain students below first class or with ATKT. Hence we must focus on following facets to bring about academic excellence:

- **Quality of Permanent Faculty**. Now four of the five Depts have PhD HODs and 24 faculty members are pursuing PhD. UGC/ AICTE recommended API scoring system has been adopted for Career Advancement Scheme (CAS), and incentives are being provided for paper presentations and FDPs, which have started yielding positive results.

- **Number of Patents held**. Presently four patents have been filed – three by Faculty and one by a student. Our target is to have at least five approved patents per Dept by 2023.

- **Research and Consultancy Opportunities**. AIT has laid down an incentive policy in 2011 to encourage consultancies. Introduction of PG depts with effect from 2014 and PhD programmes in 2020 will engender this culture.

- **More Distinctions and Univ Rank Holders.** Must encourage good students to strive for Univ marks by special coaching. Recently introduced AGIF scholarship of Rs. 40,000/- has started showing results.

- **Weak Students.** Must focus more on weak students to eliminate failures

(d) **Placement**: AIT has one of the best placements in the Western Region in terms of overall percentage, but there is tremendous scope for improvement in their quality. In 2012 batch, 96.4% were placed with an average salary of Rs 3.6 lakh, which is comparable to the best colleges in India, but there is a need to attract more higher level and core engineering firms offering Rs 5 lakh and above package:

- Ideally more than 80 percent students should have first class and less than 5 percent ATKTs in third year first sem results.

- More Industry Institute Interactions – Internships, Sponsored projects, Faculty research consultancies, In-plant training programmes, participation in National level corporate competitions and certification in Value addition courses.

- Use pool of qualified Visiting Faculty from industry – Prepared a pool of 40 technical experts including some of National Level.

(e) **College National Ranking**. AIT needs to improve its national ranking in order to attract better students and faculty. AIT is one of the select few engineering colleges which have NAAC and NBA accreditations as well as ISO 9001:2008 certification. AIT should endeavour to obtain five years accreditation for all branches in next accreditation in 2015, and be rated within the first 10 private engineering colleges by 2023. AIT has been climbing up in National ranking by Dataquest and Electronics For You (EFY) over the last few years. This year Outlook (which is a nationally recognized rating agency) has ranked AIT at 42 position amongst all private engineering colleges and at 71 amongst all colleges including IITs and NITs. Rating agencies are increasingly building in more weight-age for research and consultancy in their scoring system making

it more and more difficult for an under graduate (UG) engineering college to score high in the ranking system.

Year	Survey by	Ranking
2013	**Outlook**	**41 among private engg colleges (73 incl IITs and other govt colleges)**
2012	**Business Chronicle**	**A++ (one out of two from Maharashtra)**
2012	**Data Quest**	**66 incl IITs and other govt colleges**
2012	**EFY**	**22 among private engg colleges**

- AIT needs to introduce post-graduation courses, research and consultancy culture and introduce all round improvement in academics, infrastructure and quality of placements to improve recognized national ranking amongst private colleges to top 10 by the year 2023.

6. **External Environment**. Currently there are over 3,500 engineering colleges in India with approximately 16 lakh enrolled students, which has more than doubled in the last five years. This year more than 200 engineering colleges have closed down in Maharashtra and AP due to lack of intake. More than 1,500 colleges will close down in coming decade as the industry cannot absorb more than 5 lakh engineering freshers.

(a) **Placement Scenario**. Based on 2011 pass-out data for about 7.5 lakh engineering graduates, overall only 25% of BE students find campus placement. Another 13% join post graduation courses like ME, MBA etc. 40% BE students find placement within one year after passing out based on their individual effort. However, the balance 22% either transfer to other professions and manage subsequent employment, or remain unemployed. Of those 25% who manage campus placement, 75% and above find placement in IT firms. However, good engineering colleges in the first 20 national ranking, achieve almost 75% and above placement in core engineering and consultancy firms. Post recession, the average salary from the five premier IT firms (mass recruiters) like Infosys, TCS, Cognizant, Wipro and Tech Mahindra is stagnating between Rs 3.0 and Rs 3.5 lakh since 2008 due to a glut of technical graduates in the market. IT industry is working on an employee ratio of 60:40 of Freshers

: Laterals, and have decided that post recession the affordable cost of campus recruits has to be below Rs 3.5 lakh for some more time till the market stabilizes. Companies like Google, Yahoo and Microsoft pay in the range of Rs 10 lakh to Rs 30 lakh, but their numbers are very few. Core companies of Mechanical and Electronics and Telecommunication industry pick up fewer individuals and their salary structure varies from Rs 2.5 lakh for Kirloskar Cummins to Rs 6 lakh by Tata Motors to Rs. 20 lakh by some elite companies. Consultancy firms pay in the range of Rs 5 lakh (Deloitte) to Rs 40 lakh (some foreign firms) and above.

(b) **Employability Skills**. The employability of engineering graduates as per NASSCOM is stated to be somewhere around 22 % only because of their poor soft skills and lack of up-to-date technical knowledge. Foreign universities with their high standards are likely to make a strong entry soon to the Indian higher education system, primarily because the government needs huge foreign investment to improve our Gross Enrolment Ratio (GER) from the existing 20 to 30 by 2020, without which our young demographic profile is likely to become more of a liability than a source of strength. Independent rating agencies like QS will ensure that almost 50% of the existing engineering colleges would dry up due to greater competition. Under such circumstances, the only option for any engineering college to survive is to maintain high quality and modernize to maintain credibility. Besides the specifics mentioned above, general trends which would characterize the environment for technical higher education in the coming years are given below.

- **Educational Requirements of Knowledge Economy**.

Past Requirements	**Future Requirements**
• Skills.	Knowledge.
• Product centric.	Learner centric.
• Graduate.	Life-long learning.
• Cost of doing business.	A competitive advantage.
• Passive participation.	Active participation.
• Just-in-case.	Just-in-time.
• Static content.	Customised content.
• Mandated.	Self directed.
• Instructor led courses.	Library of learning methods.

- **The New Millennium Paradigm for Engineering Education**. It must incorporate the integration of several features which existed as separate entities till now:

Initial education	+	Continuing education (Lifelong learning)
Institutional component	+	Industry component
Formal education	+	Non-/In- formal education
Education	+	Training
Quantitative expansion	+	Quality assurance
Technology	+	Management
Traditional instruction	+	Web-based instruction
Print media	+	Electronic media
Traditional libraries	+	Digital libraries

- **Skills of an Employable Engineer**.
  - **Basic Skills:**
    - Oral & Written Communication
    - Scientific and Quantitative Reasoning
    - Critical Analysis & Reasoning
    - Technological Competency.
  - **Technical Skills :** require certification for credibility – Microsoft, IBM, Redhat, CISCO, CSI Student Chapter, CAD CAM CAE, 6 SIGMA, VLSI etc.
  - **Critical Personality Traits:**
    - Pro-active with an intrinsic drive for service excellence and efficiency
    - Emotionally robust and used to work under pressure
    - Strong team player.

7. **Challenges of Modern Engineering Education**. Engineering education is at an important juncture more than ever before, where engineers need to play an important role in development and creative solving of global and complex challenges in industry. Future engineers need to work with an understanding of multiple disciplines in collaborative teams that are culturally and philosophically diverse, cultivate complex communication and social skills. In today's challenges of the 21st century global economy, sharing of information, collaborative team work, innovative thinking, problem solving and decision making are key competencies necessary for an engineer.

There has been a significant shift, from merely mastering manufacturing skills, to emphasizing informational knowledge services. The increased use of technology is also transforming how students work and build new social practices. Adaptability to complex communication skills, non routine problem solving skills, self management or self development are extremely important.

8. **Changes in Teaching-Learning Process**. It is widely felt that traditional engineering education in preparing for lectures and lab sessions, are inadequate in preparing engineering students for being effective professionals. This is more so when the lectures turn out to be monologues and the laboratories are recipe driven rather than inquiry driven. Traditional classroom and lab practice encourage a passive form of learning within a compartmentalized curriculum. Therefore it is important for engineering education to rebuild a curriculum that focuses strongly on collaborative and interdisciplinary projects, tasks and assignments. Such activities would require students to be involved in active learning strategies, be engaged in high level problem solving skills and to be able to participate in team building activities in multidisciplinary teams.

9. **Technology Assisted Learning**. Hardware components of learning environment also influence learning significantly. They are important for both individual work and team activities. AIT should be well positioned in infrastructure and expertise to provide technology integrated learning. Advances in IT and Telecom technologies are bringing in a paradigm shift in the way a student can learn more effectively. Multimedia can help the student to learn concepts more clearly. Simulation models can enable more students to work on virtual prototypes and gain practical skills. Besides, the student can learn flexibly as per his convenience and pace. Recently MIT and Harvard announced launch of free online courses in five disciplines including engineering.

A few months earlier, a Consortium of Stanford, Princeton, University of Pennsylvania and University of Michigan announced online programs. Going by the excellent response they received, it appears that future of engineering colleges will be a blend of class room teaching and technology enhanced to self learning. Online presentations and video lectures by professionally trained presenters, will supplement the class room lectures and tutorial sessions. Already in some Institutions abroad, both learning and assessment are increasingly through peer to peer via social networks. AIT also needs to gear up for these breath taking developments. In a way, technology can be advantageously used in all locations to address the shortage of competent teachers, by supplementing the existing resources and by minimizing the gap between the Industry/Corporate requirements and present University syllabus. This will result in employable engineers to suit industry/corporate requirement. There is a great need of campus wide high speed network, which links all computing resources on campus such as email web based online applications, applicable software, libraries online, catalogues, web cast facilities and computer cluster Lecture halls, Seminar

rooms and tutorial rooms should be well equipped with necessary technology knowledge base.

10. **Industry Collaborations.** In order to make graduating students more employable, it is critical that AIT should build close collaboration with industry through MoUs. This type of collaboration can help in updating the curriculum and arranging guest lectures by experienced professionals. It can also help in organizing for internships and projects for the students so as to impart hands on skills. MNCs like IBM Microsoft, SAP, Oracle, Infosys, Intel, and Nokia have worked out a range of Industry academic collaboration programs which need to be leveraged by AIT.

11. **SWOT Analysis of AIT.**

Strengths	**Weaknesses**
JEE Main entry with no quotas.	Selected to applicant ratio low due to limited number of applicants from Army wards only.
All India background of students.	Inadequate Research & Consultancy – No PG.
Residential facilities : peer induced soft skills development.	Limited senior residential faculty.
Good Infrastructure.	Teaching Learning could be made more interactive with more tutorial discussions and application-based.
Discipline and exposure to Armed Forces background	Industry Institute interaction could be improved.
Armed Forces patronage	Slow decision-making.
Good overall placement percentage : Good image in industry	Quality of placement needs to be improved in terms of salary packages and in number of core companies.
Opportunities	**Threats**
Co-location with DRDO and Army Cat 'A' establishments.	Expansion of IITs/NITs with lower tuition fees attracting away higher merit students.
Networking possibilities with expanding Industry & Academia in Pune.	Competition from upgraded hostel facilities & autonomous status in some private institutions like Manipal, BITS, VIT.
Increasing Alumni willingness to support AIT growth initiatives.	Increasing proportion of students from rural background may dilute AIT's reputation of strength in soft skills.
Possibility of tapping Pune's sizable student population for sustaining evening courses.	

AICTE/DST/TEQIP funding for AIT projects.	

12. **Governance Excellence – The Key Differentiators.**

- Nothing breeds excellence in educational institutions better than Peer Pressure & Peer Review.
- Educational institutions have long gestation periods for breeding excellence unlike industry.
- Periodic and Structured review of all academic activities.
- Involving Students and Alumni as much as possible in many areas of governance.

13. **Performance Monitoring.**

(a) Recognize that like in every educational institution three distinct groups exist:

- **Core Academic** – Principal and other teaching staff
- **Academic Support** – Lab Assts, Lib personnel, Placement Cell, Computer Centre – programmers
- **Pure Administration** – Registrar, Establishment Section, Clerks, Warden and Hostel Attendants, Maintenance staff, Storekeepers, Security etc.

(b) Deal with each of them in a different manner, else performance and excellence will suffer over time.

14. **Governance Excellence - Alternative Trajectories.**

Ser No	Criteria	Core Academic	Academic Administration	Pure Administration
(a)	Key Resources	Profs	Tech Staff with good domain knowledge	Good managers
(b)	Culture	Free, Sharing, Communicative, Peer culture	Tech skill based, Industrious, Service orientation	Procedural & Systems driven, Tech and People orientation
(c)	Value Proposition	Autonomy, Freedom	Industry orientation, Semi-autonomous	Managerial controls & systems

(d)	What drives performance?	Peer pressure, Robust feedback mechanism	Student & Client orientation, Service Excellence	Periodic & Structured Reporting system

PART III - VISION, MISSION, CORE VALUES, GOALS, & OBJECTIVES

15. **Vision for AIT.** "Strive for excellence in providing the right environment for development of physical, intellectual, emotional and spiritual quotients with a view to produce total quality engineers preparing them to face challenges of modern information society."

16. **AIT Mission.** "To achieve National ranking amongst the top 10 private engineering colleges in India by 2023 AD."

17. **AIT Tenet.** "I shall be truthful, honest, forthright and trustworthy under all circumstances. I shall always uphold the honour, dignity and values of my parents, teachers, institution and my country."

18. **Core Values.**

- Excellence
- Innovation
- Commitment
- Honesty, Integrity and Truthfulness
- Ethics
- Continuous Learning and Development.

19. **Goals.**

- To work together, striving for excellence in a free and supportive learning environment, enabling both students & staff to become sensitive, reflective, intelligent, confident and responsible.
- To establish a premier Institute for imparting high quality engineering education through student centered learning in a conducive working environment.
- To augment all available avenues for providing a healthy environment for physical, intellectual, emotional and spiritual growth of students and staff.
- To produce competent engineers by imparting knowledge and skills, imbibed with the spirit of professionalism and responsible citizenship in a competitive global modern information society.

(d)	What drives performance?	Peer pressure, Robust feedback mechanism	Student & Client orientation, Service Excellence	Periodic & Structured Reporting system

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- To produce competent engineers by imparting knowledge and skills, imbibed with the spirit of professionalism and responsible citizenship in a competitive global modern information society.

20. **Short Term Objectives (2-3 years) by 2016 AD.**

- Attract high merit UG students with last cut-off at 600 AIT merit (750 at present) for 300 vacancies.
- Achieve excellent teaching-learning environment to achieve:
  - Less than 5 % failures in each year,
  - 50% and 80 % first class in 3rd and 4th years respectively,
  - One University rank holder in at least two Departments,
  - 100% faculty with PG degree,
  - 25% Faculty with PhD degree.
- Achieve placement of 35% students in core high-end companies and maintain an overall placement of 90% students.
- Initiate Post-graduate courses and enhance Industry – Institute interaction and R & D activities to a score of 50% NBA score (from 25 % at present).
- Achieve 5 % placement in the Armed Forces.
- Introduce Civil Engineering UG department with hostel facilities to exploit inevitable infrastructure boom in the coming years.
- Establish Entrepreneurship Development Cell.
- Achieve NBA accreditation for all Departments for 5 years.

21. **Mid-term Objectives (4-6 years) by 2019 AD**.

- Attract high merit UG students with last cut-off at 500 AIT merit for 360 vacancies.
- Maintain excellence in teaching-learning environment to achieve:
  - Zero failures in each year,
  - 60% and 85 % first class in 3rd and 4th years respectively,
  - One University rank holder in each Department.
  - 35% faculty with PhD degree.
- Achieve placement of 50 % students in core high-end companies and an overall placement of 100% students.
- Introduce second Post-graduate course and enhance Industry-Institute interaction and R&D activities to a NBA score of 70%.
- Receive consultancies and research grants up to Rs 1 crore from firms and AICTE/ Pune University.
- Introduce foreign exchange programs in AIT.
- Achieve autonomous status under Pune University and introduce continuous assessment system and industry-friendly syllabus in AIT.
- Achieve at least one Patent per Department.

22. **Long Term Objectives (7-10 years) by 2023 AD**.

- Attract high merit UG students with last cut-off at 450 AIT merit for 360 vacancies.
- Maintain excellence in teaching-learning environment to achieve:
  - Zero failures in each year,

- 70% and 90 % first class in 3rd and 4th years respectively,
- Two University rank holder in each Department.
- 50% faculty with PhD degree.

- Achieve placement of 60% students in core high-end companies and maintain an overall placement of 100% students.
- Introduce Post-graduate courses in all Depts and enhance Industry-Institute interaction and R&D activities to a NBA score of 80%.
- At least one PG program ranked amongst top 10 private engineering colleges.
- Earn consultancies and research grants able to sustain all PG Departments and research projects and enable seed money for college funded projects.
- Achieve at least two Patents per Department.

23. **UG Education.**

(a) **Goal:** Create a collegiate experience that encourages intellectual rigour and productive teamwork, and results in the graduation of total quality engineers who are well prepared to succeed in the global workspace.

(b) **Strategies and Tasks :**

- **Strategy 1**: Attract high AIT merit students and provide a campus environment for producing highly motivated and successful engineers:
  - Interactive classes and TDs
  - Superior infrastructure with knowledge facilities like MOODLE etc.
  - Well equipped labs: supervised projects from SE onwards
  - Technical seminars and workshops
  - Participation in national competitions and conferences
  - Credit based system of continuous performance evaluation
  - Meaningful industry interaction and internships
  - Soft skills development through peer pressure
  - Motivational talks by eminent personalities
  - Stimulating hostel environment – flank in-charges , student mentors; Responsive administration
  - Feedback mechanism for better governance.

- Wide publicity amongst Army wards and offrs wards.
- Zero tolerance for ragging.

- **Strategy 2**: : Maintain excellent teaching, learning environment to achieve Zero failures, 70% and 90 % First class in 3rd and 4th years respectively and two University rank holders in each Deptby 2023:
  - 100% Faculty should be with PG degree by 2014.
  - 50% Faculty should be PhD holders by 2020.
  - 30% scholarships for high merit holders by 2015.
  - Reward and Recognition Awards for excellence in teaching.
  - Continuous evaluation of the effectiveness of Faculty and each course content.
  - Integration of written and oral communication skills throughout curricula.
- **Strategy 3**: Ensure that all AIT students graduate with strong core engineering knowledge enriched by a broad education to ensure that 20% students obtain post graduation, 100% registered students get placement, and 60% placements are in core engineering and consultancy firms with salary package of Rs 6 lakh and above.
  - Prepare students with the ability to use the techniques, skills, and modern engineering tools necessary for modern engineering practice – Value Addition Courses as evening classes.
  - Prepare students for ethical and professional leadership.
  - Prepare students to communicate effectively among diverse audiences.
  - Prepare students for lifelong learning and professional improvement.
- **Strategy 4**: Introduce core engineering domain of Civil Engineering by 2016:
  - Exploit the infrastructure boom
  - Offer UES candidates for recruitment to Corps of Engineers.

- **Strategy 5**. Achieve good branding for AIT:
  - NBA accreditation for all Depts in 'A' grade by 2016.
  - Ranking by recognised rating agencies within first 10 private engineering colleges by 2023.
  - Implement exchange programs with Foreign Universities by 2017.
- **Strategy 6**. Obtain Autonomous status under Pune Univ:
  - Permanent affiliation to Pune Univ by 2013.
  - Submit proposal for Autonomous status by 2018.

24. **PG Education and Research.**

(a) **Goal**: Build and sustain nationally recognised engineering research and PG programs of relevance to industry.

(b) **Strategies and Tasks :**

- **Strategy 1**. Advance research and scholarly enterprise:
  - Recruit and retain Faculty with good research and scholarship potential.
  - Introduce PG courses in a phased manner for 4 Departments by 2020.
  - Identify and support programs and areas of emerging distinction (2020 target: 1 of 4 PG programs ranked in top 10 of private research colleges).
  - Support mid-career Faculty in pursuing new research programs.
- **Strategy 2**: Initiate research culture in AIT UG students:
  - Introduce 5 years Integrated ME Course in one Dept by 2017 and integrated PhD course in 1 Dept by 2020.
  - Provide opportunities for UG research experience.
- **Strategy 3**. Improve research synergies with Industry:
  - Stimulate long-term, mutually beneficial industrial collaborations (2023 target : 50% Faculty with at least one industry research / consulting contact per year).

- Increase appreciation of entrepreneurship among students and Faculty (Establish Entrepreneurship Cell).
- Encourage registration of patents (2023 target: two patents per Dept).

- **Strategy 4**: Advance the reputation of research and PG programs in Defence industry and outside:
  - Accept Army Technology Board (ATB) projects.
  - Accept MOUs with DRDO establishments of Pune.
  - Aggressively market, at the state and national levels, the college's research enterprise and PG programs.
  - Stimulate public involvement in conferences, lectures and seminars.
  - Utilise emerging technologies and activities, such as electronic mail and electronic distance learning.

- **Strategy 5**. Obtain AICTE/DST/TEQIP grants from Government sources.
  - Modernise and remove obsolescence in lab equipment – Rs 15 lakh under MODROBS scheme of AICTE
  - Apply for MODROBS grants for promoting Continuing Education Programmes for own students and for establishing Learning Resource Centres (LRC) for local industry and consultancies.
  - Research Promotion Scheme (RPS) for innovation in established and newer technologies :-
    - Rs 5 to 10 lakh for one or more Faculty members for development of end products which encourage further research activity.
    - Rs 10 -12 lakh for young Faculty under 30 yrs doing PhD.
    - Rs 20 lakh to one or more Faculty members who aim to develop new research facilities at the parent institute.
  - Entrepreneurship Development Cell (EDC)
  - TAPTEC projects – Rs 20 lakh for research in Thrust Areas for national development

- Seminar Grants (SG), Staff Development Programme (SDP), Visiting Professorship (VP) etc.

25. **Value Addition Courses / Internal Revenue Generation (IRG) Scheme.**

(a) **Goals**: Impart industry specific beyond-syllabus learning for own students and generate income from open-to-all market friendly programmes for sustaining AIT's growth plan on a No-Profit basis to the tune of Rs 1 crore by 2023.

(b) **Strategies and Tasks :**

- **Strategy 1**. Introduce 20 hour/month value addition technical courses (CEPs) using AITs infrastructure in evening sessions after regular college hours:
  - IT Courses on C, C++, Data structures, Open Source C Programming, JAVA and .Net using current lab set-up and industry experts initially and own trained Faculty thereafter – Revenue generation @ Rs 2000/month/student.
  - Electronics & Telecommunication Engineering Courses on VLSI embedded systems techniques, Visual instrumentation using Lab-view software – Revenue generation Rs 2,000/month/student.
  - Mechanical Engineering Courses on Auto-CAD, CAM, CAE, 6 SIGMA, CNC training, CATIA – Revenue generation Rs 2,000 to Rs 4,000 / month/student.
  - Android technology course with some additional set-up cost of Rs 1 lakh – Revenue generation @ Rs 2000/month/ student.
  - Other customised modular courses after additional set-up cost of Rs 2 lakh – Revenue generation @ Rs 2000 /student/month and saleable project @ Rs 0.2 to 0.5 lakh / project.
- **Strategy 2.** Introduce SSB Coaching with ex-SSB Faculty by adding a mini-obstacle course to achieve 10% placement of AITians in Armed Forces.
  - Revenue generation @ Rs 2000/student.
- **Strategy 3.** Organise CAT and GATE classes by recognised agencies for AIT students and open to all:
  - Revenue generation @ Rs 2000/student.

- **Strategy 4.** Introduce Finishing School in conjunction with CII / MCCIA:
    - 20 hour per month courses on Soft Skills development for all streams of graduation under TPO for revenue generation @ Rs 2000/student as well as cater for AIT's own student population.
- **Strategy 5**. Offer IT lab facilities, projects and product development for other institutes and industry:
    - Cloud computing online courses and services investing Rs 15 lakh on set-up cost – Revenue generation from all AWES institutes @ Rs 1 lakh per institute and Rs 2000 /student/month.
    - Generate revenue of Rs 1 lakh and above on each product module developed for industry.
- **Strategy 6.** Offer consultancies in Civil, Mechanical and E&TC Engineering to Pune's infrastructure firms, auto industry and other SMEs in PCMC and surrounding areas:
    - For Faculty development and revenue generation for AIT and Faculty.

PART IV - COLLEGE GROWTH PLAN AY 2013-23

26. **Strategic Plan Matrics for AY 2013-23 (refer Appendix). Salient aspects of the metrics are highlighted below** :-

(a) **Accreditation.**

- **2012-13.** Permanent affiliation to Pune University.
- **2013-14**. NBA certification – 'IT Dept' for 1st time.
- **2017-18**. Obtain Autonomous status under Pune University.

(b) **Horizontal Expansion.**

- **2015-16.** Introduce Civil Engineering branch of 60 strength with additional hostel facilities for 240 children.

(c) **Vertical Expansion.**

- **2014-15**. Introduce PG course in Mechanical Engineering (Machine Design) with 18 seats PG course to be expanded later to full strength of 24 seats if response from army wards is good.
- **2016-17**. Introduce PG course in E&TC / Computer Departments based on prevailing market survey.
- **2019-20**. Introduce PG in Civil Engineering Department.
- **2020-21**. Introduce PhD Research Centre with provision to opt for ME with PhD.

(d) **Research and Consultancy / MOUs with Industry.**

- **2012-13.** Introduce AICTE / DST / TEQIP research promotion schemes and best practices.
- **2013-14 onwards.** Introduce R&D and MOUs with Industry in a phased manner along with introduction of PG courses.

(e) **Exchange Programs with Foreign Universities.**

- **2014-16.** Explore possibilities of exchange programs in Mechanical and E&TC Branches.
- **2016 -17.** Implement pilot projects.
- **2017 -18.** Implement exchange programs.

(f) **Value Addition Courses / Internal Revenue Generation(IRG) Schemes (2013 onwards).**

- **IT Courses.** C,C++,Data Structures, Open Source C Programming, JAVA, .NET, Android technology, Software testing, Cloud Computing Courses and Services, Modular Courses, Saleable projects, Product Development
- **E&TC Engg Courses.** VLSI Embedded Systems Techniques, Visual instrumentation using Lab-View S/W
- **Mech Engg Courses.** 6 SIGMA, CAD, CAM, CAE, CNC Trg.
- **Soft Skills Course**. By Professional coaching agencies in GD, PI, English and Foreign languages, Logical reasoning, Personality Development etc.
- **CAT/GATE/GRE/SSB Preparation Courses.** In conjunction with training orgs like IMS, Career Launcher, TIME, private SSB coaches etc.

- **Project Mgmt Courses**. For working professionals.

(g) **Alumni Contribution.**

- **2012-13.** AIT Alumni Coordination Cell of 40 student members formed to coordinate with Alumni Association.
- **2013-14 onwards.** Organise class-wise events.
- **2014-15 onwards.** Develop alumni special interest and "friends" groups for appropriate Depts.

27. **Infrastructural Development Plan.**

(a) **Academic Infrastructure.**

- **2012 - 14.**
  - New Library Building including PG Centre and modification of three new IT and Civil Engg labs - Rs 5.0 crores.
  - E&TC Dept:
    - Radio Frequency & EMI/EMC lab - Rs 27 lakh.
    - Modification of three E&TC labs – Rs 11 lakh.
    - Upgradation of lab as per new Second Year curriculum – Rs 5 lakh.
    - Signal Processing & Communication Lab – Rs 5 lakh.
  - Mechanical Dept :
    - CNC Trainer, FEA, MATLAB & CAM Software & Vib Set-up – Rs 30 lakh.
    - Modification of TOM, DOM and Fluid Mechanics labs – Rs 3 lakh
    - One new lab/ tutorial room for CNC trainer in Workshop – Rs 2 lakh.
    - Three new Lecture Halls in Workshop building – Rs 10 lakh.
- **2014 - 15.**
  - New Civil Engineering Dept Building – Rs 5 crores.
  - **E&TC Dept:**
    - Embedded & VLSI Lab with Microwind Software – Rs 6 lakh.

- Computer System Lab – Rs 8 lakh.
- Upgradation of lab as per new Third Year curriculum – Rs 5 lakh.

- **2015 -16.**
  - **E&TC Dept:**
    - Advanced Communication Lab Equipment – Rs 10 lakh.
    - Upgradation of lab as per new Fourth Year curriculum – Rs 5 lakh.
- **2016-17.**
  - **E&TC Dept:**
    - PG Lab equipment and furniture – Rs 20 lakh.
    - E&TC PG tutorial rooms (2 Nos) – Rs 10 lakh.
    - Advanced DSP Lab Equipment for PG – Rs 10 lakh.
- **2020-21.**
  - Research Centre for PhD – Rs 20 lakh.

(b) **IT Infrastructure.**

- **2012 -13.**
  - Server Room Renovation – Rs 8 lakh.
  - Additional Network Security Firewall – Rs 3 lakh.
  - Wi-fi extension to Boys hostels & rest of Academic Block – Rs 12 lakh
- **2013-14.**
  - Additional Network Security (Firewall) - Rs 12 lakh.
  - Wi-fi extension to New library, Girls hostel and NBH II & rest of Academic Block – Rs 6 lakh.
  - Internet bandwidth increase from 25 to 75 Mbps – Rs 10 lakh recurring.
  - New Network & Info Security lab – Rs 15 lakh

- **2014 -15.**
    - ERP system for college administration – Rs 12 lakh recurring.
    - Number Access Point system in Hostel Rooms – Rs 6 lakh
    - Virtual class-room – Rs 10 lakh.
    - Wi-fi of complete campus – Rs 1.5 lakh.
    - New Desktop PCs (40 Nos) – Rs 16 lakh.
- **2015-16**.
    - Cloud computing and server virtualisation – Rs 5 lakh.
    - Replacement of all Switches with Manageable Switches – Rs 3.5 lakh.
- **2016-17**.
    - Cloud computing and server virtualisation – Rs 10 lakh.
- **2017-18**.
    - New Desktop PCs (40 Nos) – Rs 18 lakh.

(c) **Hostel Infrastructure.**

- **2014 -15.** Introduce one more flank with capacity of 105 students in New Boys Hostel I – Rs 2.61 crores.
- **2016-17.** Additional hostel accommodation for 240 UG Civil Engineering students
- **2017-18**. Cater for a small hostel with dining facilities for 60 persons for International Students Exchange programs and other research scholars if required.

(d) **Library Infrastructure in New Library Building.**

- **2012-14.**
    - State of the art Digital Library – Rs 14 lakh annually
    - Separate library server – Rs 1.5 lakh.
    - Book bank for first 10 in all departments – Rs 1 lakh.
    - Internet connectivity including wi-fi to NLB –Rs 5 lakh.

- Departmental libraries in all departments –Rs 10 lakh.

- **2014-16.**
  - Photocopying facilities – Rs 2 lakh.
  - Group Study cum Presentation Room – Rs 4 lakh.
- **2018-19**.
  - Self loan machines/ RFID based – Rs 20 lakh.

(e) **Sports Infrastructure.**

- **2012-13.**
  - Permanent lights for Basketball Court – Rs 2 lakh
  - Resurfacing of Football ground – Rs 10 lakh
- **2013-14**.
  - Resurfacing of second Volleyball court – Rs 1.5 lakh.
  - Flooring of Badminton Court – Rs 1 lakh.
  - Garware net fencing around Tennis & Basketball Courts and Volleyball grounds – Rs 1 lakh.
  - Turf practice cricket pitch – Rs 1 lakh.
- **2014-15**.
  - Re-surfacing of 2nd basketball court – Rs 7 lakh.
  - Renovation of one Squash court – Rs 5 lakh.

(f) **Administrative Infrastructure.**

- **2013-14.**
  - New Main Gate – Rs 10 lakh.
  - Sewage Treatment Plant – Rs 50 lakh
  - Alternative solar energy sorce for supplementing electricity needs - Rs 12.5 lakh.
  - Additional outdoor dining arrangements – Rs 5 lakh.
  - Renovation of existing two mess dining halls – Rs 12 lakh.

- Push Cock System for flushing – Rs 10 lakh
- Replacement of existing drainage lines behind Shopping Complex, GH and OBH – Rs 15 lakh.

- **2014-15.**
  - New Dining Hall modified from old gym – Rs 12 lakh.
  - Kitchen Waste Grinding Machine – Rs 2 lakh.
  - Cookhouse renovation – Rs 5 lakh
  - Solenoid system for all overhead water tanks – Rs 2 lakh.

28. **Infrastructural Maintenance Plan.**

Ser No	Item of Work	Life Cycle	Remarks
(a)	Roads (Rs 1 lac/100m)	3 yrs (AIT 4 yrs)	Rs 12 lakh pa
(b)	Terrace water proofing (Rs 55 lakh by AIT)	10 yrs	Rs 60 lakh in 10 years
(c)	Seepages through bathroom blockages etc	As and when occurs	Rs 10 lakh in 5 years
(d)	Whitewash (cookhouse, stores, toilets)	6 monthly	Rs 2 lakh pa
(e)	Whitewash & Dry distemper (Rooms)	1 yr	Rs 8 lakh pa
(f)	OB Distemper (Class-rooms & labs)	2 years	Rs 2.5 lakh pa
(g)	External paint (acrylic) for Aca Block front face & hostels	5 yrs	Rs 10 lakh in 5 years
(h)	External paint (cement based for balance surfaces)	2 yrs	Rs 3 lakh pa
(j)	Painting (steel & woodwork)	2 yrs	Rs 1 lakh pa
(k)	Wire mesh (windows & hostel corridors)	5 yrs	Rs 5 lakh in 5 yrs
(l)	Drainage	As required	Rs 1 lakh pa
(m)	Plumbing (external & internal)	As required	Rs 0.5 lakh pa & Rs 1.5 lakh pa.
(n)	Overhead Water Tanks	As required	Rs 1 lakh pa

(o)	STP	As required	Rs 2.5 lakh pa
(p)	Termite treatment	5 years	Rs 1 lakh pa
(q)	Plastering repair work	As required	Rs 2 lakh pa
(r)	Solar water heater maintenance	As required	Rs 3 lakh pa
(s)	Electrical maintenance	As required	Rs 4 lakh pa
(t)	Water coolers & Aquaguards	As required	Rs 2 lakh pa
	Total		**Rs 58 lakh pa**

PART V - BUDGETARY ANALYSIS

29. **BUDGET FOR FY 2013-14**

(Rs IN LAKH)

Ser No	Income				Expenditure			
	Particulars	**College**	**Hostel**	**Total**	**Particulars**	**College**	**Hostel**	**Total**
1	College Fees#	907.50	-	907.50	Pay & Allowances	905.00	25.00	930.00
2	Hostel Fees @	-	205.00	205.00	Electricity & Water	30.00	70.00	100.00
3	Interest on Investments	247.00	12.30	259.30	Projects (Civil Works & Maint)	48.00	76.00	124.00
4	Sale of Prospectus (5000 Nos x Rs 750/-)	37.50	-	37.50	Departmental Expenditure/ Library/IT Infra	157.87	-	157.87
5	Rent & Allied Charges (Married Accn / Shopping)	10.00	10.00	20.00	Scholarship & Students co-curricular activities	43.30	11.50	54.80
6	Promotional Charges FE : Rs 15,000/- X 300.	60.50	-	60.50	Adm & Maint, Security etc	53.50	43.00	96.50
7	Misc Income (Eg Barrack damage, maint)	16.00	4.00	20.00				
8	Wi-Fi Facilities for Students	-	18.00	18.00				

Total Income	**1278.50**	**249.30**	**1527.80**	**Total Expdr**	**1237.67**	**225.50**	**1463.17**
				Surplus	**40.83**	**23.80**	**64.63**
				Total Income	**1278.50**	**249.30**	**1527.80**

 # College Fee:-

(a) Tuition Fee : FE to BE 70000X 1200 Nos =Rs 840.00 lakh
(Rs 65000/- + 7.5% increase = Rs 70,000/-)

(b) Development Fee : FE-BE 5000 X 1200 = Rs 60.00 lakh

(c) Registration Fee : FE = 2500X 300 = Rs 7.50 lakh
Total = Rs 907.5 lakh.

@ Hostel Fee

1000 Nos X 20500 = Rs 205.00 lakh
(Rs 19,000/- + 7.5% increase = Rs 20,500/)

Note: Depreciation of assets is Rs 102 lakh from College fund and Rs 35 lakh from Hostel fund which are accruing in the College Asset Replacement Fund.

30. **AIT Fund State (Fixed Deposit) in Rs. Lakh as on 31 Aug 2013.**

(a)	AWES Funds (interest not available for AIT)	
	(i) Corpus(50% interest fed back to corpus)	861.55
	(ii) Asset Replacement Fund (ARF) AWES	
	(fed from bal 50 % interest of corpus fund)	593.47
	Sub-total	1,455.02
(b)	College Funds (interest available for AIT)	
	(i) College Fund	1,524.44
	(ii) Asset Replacement Fund (ARF) College	
	(fed from depreciation of assets)	245.09
	(iii) Alumni Fund	23.43
	(iv) Medals & Awards Fund	13.60
	(v) AIT Teachers Welfare Fund	5.00
	(vi) Vehicle Fund	10.32
	Sub-total	1,821.88

(c)	Security Funds (interest available for AIT)	
	(i) Students Refundable Security Deposit	315.00
	(ii) Gratuity & leave encashment (Staff)	327.34
	(iii) Director AIT & DTE Bombay Deposit	15.00
	Sub-total	657.34
(d)	Hostel Fund	157.81
	Total	**4092.05**

31. **Budgetary Analysis.**

(a) AIT has to be self-sustaining as per AWES norms, but AWES funds are available for major projects.

(b) Cost of education of a student in AIT is approximately Rs 1.2 lakh per annum.

(c) FD interest generated from AIT College funds and Students Security deposit subsidises about 15% to 20% of the revenue expenditure.

(d) AIT College Fund must grow at 20 % per annum to cater for inflation and salary hikes. However, to cater for long term growth another 10 % growth of College Funds is also desirable. Hence, college funds should not be allowed to deplete under any circumstances.

(e) AIT revenue income is primarily based on tuition fees, whereas in premier colleges 40% to 50% of the income is generated from grants and consultancies.

(f) Pay and Allowances consume 90% of the revenue income leaving very little for financing other college activities. There is a need to generate at least 10% more income from grants, consultancies and IRG schemes ie approximately Rs 1 crore per year to provide scope for healthy growth, industry-institute interaction and meaningful research work.

PART VI - CONCLUSION

32. In the next 10 years a number of Post Graduate (PG) courses and a Research Centre should be introduced to inculcate a research & consultancy culture in AIT. Initially the first PG course would have to depend on civilians and possibly Army officers on study leave to fill up the PG vacancy. But after the initial years, students passing out of AIT would definitely fill bulk of the vacancies as future trend suggests that industry would be recruiting greater number of post graduates in attractive jobs. Students undergoing Post-graduation would also be available for taking lectures for UG classes. These would also enable AIT to attract AICTE and University grants and consultancies from the industry.

33. Introduction of a number of certification courses and market friendly soft skills and SSB / CAT courses and AICTE schemes, ATB and DRDO projects would definitely improve the employability of AIT graduates besides generating revenue for sustaining AIT's infrastructural growth and maintenance plans. Simultaneously, implementation of MOUs with foreign universities would be necessary to improve AIT's branding at the national level.

34. Technical higher education system in India is likely to undergo rapid transformation in the coming decade to keep pace with the imperatives of a booming national economy which necessarily has to ride on a sound technological foundation. There is likely to be much greater competition amongst the premier educational institutions to be counted amongst the first twenty. Corporate and foreign universities are likely to enter this field introducing their corporate governance norms and practices with fast decision-making systems. Existing University and labour tribunal service rules which are applicable to AIT also, are excessively sympathetic towards employee grievances. Adoption of corporate norms and practices are likely to enable a more incentive oriented governance system which would allow incentives to the performers and harsher deterrents for non-performers.

35. AIT would have to adapt to these systems and practices to implement all the recommended measures in a highly competitive environment. It would necessitate granting greater functional autonomy to the local college management and especially the college Director in terms of faster decision-making as done in other professional educational institutions.

Appendix
(refer Para 23 of AIT PP Plan 2011-20)

Strategic Plan Metrics for Academic Years 2013 – 2023 (in percentage progress)

Ser No	Goal , Strategy	Metric	Baseline 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
1	**UG Edu** Strategy 1	Attract high AIT merit students and provide a campus environment for producing highly motivated and successful engineers.	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%
2	**UG Edu** Strategy 2	Maintain excellent teaching, learning environment to achieve Zero failures, 70% and 90% First class in 3rd and 4th years respectively and two rank holders in each Dept by 2023.	30%	40%	50%	60%	70%	80%	85%	90%	95%	100%
3	**UG Edu** Strategy 3	Ensure that all AIT students graduate with strong core engineering knowledge enriched by a broad education to ensure that 20% students obtain post-graduation, 100% registered students get placement and 60% placements are in core engineering and consultancy firms with salary package of Rs 6 lakh and above.	50%	56%	62%	68%	74%	80%	86%	92%	98%	100%
4	**UG Edu** Strategy 4	Introduce core engineering domain of Civil Engineering by 2016.	0%	0%	25%	50%	75%	100%	100%	100%	100%	100%
5	**UG Edu** Strategy 5	Achieve good branding for AIT	40%	50%	60%	70%	80%	90%	100%	100%	100%	100%
6	**PG Edu & Research** Strategy 1	Advance research and scholarly enterprise.	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7	**PG Edu & Research** Strategy 2	Initiate research culture in AIT UG students.	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8	**PG Edu & Research** Strategy 3	Improve research synergies with Industry.	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%

9	**PG Edu & Research** Strategy 4	Advance the reputation of research and PG programs in Defence industry and outside.	0%	10%	20%	30%	45%	60%	75%	90%	100%	100%
10	**PG Edu & Research** Strategy 5	Obtain AICTE/DST/TEQIP grants from govt sources	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
11	**IRG Scheme** Strategy 1	Introduce 20 hr / month value addition technical courses (CEPs) using AITs infrastructure in evening sessions after regular college hours.	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
12	**IRG Scheme** Strategy 2	Introduce SSB Coaching with ex-SSB Faculty by adding a mini-obstacle course to achieve 10% placement of AITians in Armed Forces.	10%	20%	25%	50%	75%	100%	100%	100%	100%	100%
13	**IRG Scheme** Strategy 3	Organise CAT & GATE classes by recognized agencies for AIT students and open to all.	10%	20%	25%	50%	75%	100%	100%	100%	100%	100%
14	**IRG Scheme** Strategy 4	Introduce Finishing School in conjunction with CII / MCCIA.	10%	20%	25%	40%	55%	70%	85%	100%	100%	100%
15	**IRG Scheme** Strategy 5	Offer IT lab facilities, projects and product development for other institutes and industry.	10%	20%	25%	40%	55%	70%	85%	100%	100%	100%
16	**IRG Scheme** Strategy 6	Offer consultancies in Civil, Mechanical and E&TC Engineering to Pune's infrastructure firms, auto industry and other SMEs in PCMC and surrounding areas.	0%	0%	10%	20%	40%	60%	80%	100%	100%	100%

institutions to be counted amongst the first twenty. Corporate and foreign universities are likely to enter this field introducing their corporate governance norms and practices with fast decision-making systems. Existing University and labour tribunal service rules which are applicable to AIT also, are excessively sympathetic towards employee grievances. Adoption of corporate norms and practices are likely to enable a more incentive oriented governance system which would allow incentives to the performers and harsher deterrents for non-performers.

35. AIT would have to adapt to these systems and practices to implement all the recommended measures in a highly competitive environment. It would necessitate granting greater functional autonomy to the local college management and especially the college Director in terms of faster decision-making as done in other professional educational institutions.

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06 Nov 2013.