

Report on the excellent work being done by Final Year B. E. Students at the Colleges, affiliated with GTU:

**PATENT SEARCH and ANALYSIS REPORTS**

to be submitted by

**Every Final Year B.E student**

**This submission is going to be considered when the student projects are evaluated at the end-semester examinations. Hence we want all the Final Year B.E. students to upload the PSAR reports during the next couple of days through our online platform.**

- If a student has not yet submitted the PSAR report, he/ she may do it without any further delay.
- Every Faculty member, who is guiding the Final Year projects and every Head of Department, may please confirm that every one of their students, the PSAR has been uploaded.

INTRODUCTION: GTU Innovation Council (GIC) has launched a massive movement for IPR literacy among students, as a part of their final year projects. Through its twenty five Innovation Sankuls, GIC has created a Forum for bringing faculty members, students and industries. The two initiatives have brought the innovation movement, spear-headed by the students, into Colleges and the MSMEs. Thus 1900 industries said that they had benefitted from the work on IDPs by GTU's final year students during academic year 2011-12. A similar impact, during the academic year 2012-13, has been acknowledged by more than 2100 MSMEs, Industries and

informal sectors. During the last two years, nearly 3000 professors have participated in the 'Patenting in Engineering' and PSAR workshop.

To improve the innovation quotient of each of the IDP / UDP, GIC updated the framework for the Final Year projects and inserted PSAR as a mandatory activity under IDP / UDP for all 7<sup>th</sup> semester BE students at Colleges, affiliated with GTU. By now as per the data received more than 20,000 final year students have been trained by the trained faculties at their respective colleges. *(Please see the PSAR reports on the GTU web-site.)* These efforts have put us in the next orbit of creating a distributed, inclusive and frugal university-based large-scale innovation ecosystem. We have used our web-site, supplemented by GIC's social media site and e-mails, to reach out to every single final year students and for giving them wider access to toolkits, resource materials, mentoring, real-time doubt clearance and hand-holding support. We have got a huge response and GIC has used social media as a tool to help every final year student during PSAR activities round the clock during the last couple of months.

GTU has received nearly 1.5 lakhs patent search and analysis reports from registered final year students. Our students have extensively studied the patents filed by the Indian Patent Office, U.S. Patent Office and European Patent Office, related to their respective IDP / UDP. This creates an awareness about similar technologies available or under development throughout the globe. The faculty members at Colleges, the expert mentors and Intellectual Property Rights team at GIC have played vital role in taking our policy into grassroots level implementation mode.

Students had been given a platform to register their project details during Phase 1. During Phase 2 they were given the facility to add the Abstract and the information about the faculty-supervisor and the mentor, from the industry, wherever applicable. About 40,000 students registered during Phase 2. During Phase 3, every student was required to submit a minimum of 5 patent review reports, related to their IDP / UDP. We have considered Phase 2 data as the sample space and we have generated the information for all the colleges affiliated to GTU. Though we have mentioned every student to do 5 PSAR Reports some have even submitted more and we have accepted that. In some cases, students who had missed this assignment during Phase 1 or Phase 2 have submitted their details alongwith PSAR in Phase 3. Hence sometime number of students who have submitted PSAR might be more than the sample space considered as a reference in Phase 2, as given in the table below. We have tried to benchmark not only the quantity but also the quality of the work. We have also given branch wise statistics of the entire massive operation in the annexures. We have mentioned both the number of the

PSAR reports studied and percentage of completion of the task in Annexure 1 and 2 respectively. We congratulate the innovation practices and pedagogies adopted by various colleges to make the study of patents and their analysis a grand success at most of the Colleges.

For all the participants in the GTU innovation ecosystem, we are providing the data, relating to all the Colleges in the three Annexures, attached with this Report. This analysis of Patent Search and Analysis Reports (PSAR), is based upon the data received from all the 7<sup>th</sup> semester BE students of GTU Affiliated Colleges till 31<sup>st</sup> October 2013.

### Annexure 1

Sr. No.	College Code	College Name	Number of Patents reviewed	Total Number of Students registered after Phase 2	Number of students who have submitted PSAR Report,Phase 3	Approximate percentage of the students in the college who have completed the task (%)
1	082	Dr. Jivraj Mehta Institute Of Technology, Mogar, Anand	1529	301	306	100
2	092	Veerayatan Group Of Institutions-faculty Of Engineering & Faculty Of Management	810	162	162	100
3	085	Hjd Institute Of Technical Education And Research, Kera	1370	275	274	100
4	066	Sabar Institute Of Technology For Girls, Tajpur, Sabarkantha	2338	470	468	99
5	076	Shri Swami Atmanand Saraswati Institute Of Technology, Surat	2270	459	454	99
6	081	Venus International College Of Technology, Gandhinagar	1835	382	367	96
7	087	Parul Institute Of Technology, Limda	1453	303	291	96
8	089	Shri Labhubhai Trivedi Institute Of Engineering & Technology, Rajkot	1064	223	213	95
9	083	Dr. Subhash P. Chavda Ahir Kelvani Mandals Group Of Institutions, Junagadh	992	209	198	95
10	086	Laxmi Institute Of Technology,	1131	239	226	95

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		Sarigam				
11	075	Shankersinh Vaghela Bapu Institute Of Technology, GN	1963	416	393	94
12	068	Sardar Patel Institute Of Technology, Piludara, Mehsana	1602	343	320	93
13	059	G. K. Bharad Institute Of Engineering, Rajkot	1736	375	347	93
14	053	Chhotubhai Gopalbhai Patel Institute Of Technology, Tarsadi, Bardoli	1970	426	394	92
15	080	Vadodara Institute Of Engineering, Kotambi, Waghodiya	1798	389	360	92
16	065	Merchant Engineering College, Basna, Visnagar	1754	380	351	92
17	054	Darshan Institute Of Engineering & Technology, Hadala	1873	406	375	92
18	038	R. K. College Of Engineering And Technology, Rajkot	2719	592	544	92
19	035	Noble Group Of Institutions, Junagadh	1783	389	357	92
20	063	Madhuben And Bhanubhai Patel Women Institute Of Engineering For Studies And Research In Computer And Communication Technology	2116	468	423	90
21	046	Universal College Of Engineering & Technology, Ahmedabad	1803	399	361	90
22	078	Smt. S. R. Patel Engineering College	1165	258	233	90
23	034	Narnarayan Shastri Institute Of Technology, Jetalpur	1992	442	398	90
24	024	Hasmukh Goswami College Of Engineering, Vahelal	1746	389	349	90
25	006	Bhagwan Mahavir College Of Engineering & Technology, Surat	1478	331	296	89
26	012	Gandhinagar Institute Of Technology, Gandhinagar	2314	524	463	88
27	088	Samarth College Of	1130	256	226	88

		Engineering And Technology, Himatnagar				
28	011	G. H. Patel College Of Engineering & Technology, V V Nagar	2038	463	408	88
29	090	Tatva Institute Of Technological Studies, Modasa	1260	287	252	88
30	030	Leelaben Dashrathbhai Ramdas Patel Institute Of Technology & Research, Gandhinagar	2935	670	587	88
31	091	Shri Satsangi Saketdham Ram Ashram Group Of Institutions, Vadasma	1133	260	227	87
32	014	Government Engineering College, Bharuch	2546	585	509	87
33	032	L. J. Institute Of Engineering And Technology, Ahmedabad	2157	497	431	87
34	037	Parul Institute Of Engineering & Technology, Waghodia	3807	886	761	86
35	008	Birla Vishvakarma Mahavidyalaya, Vallabh Vidyanagar	568	132	114	86
36	064	K. J. Institute Of Engineering And Technology, Savali	1512	352	302	86
37	041	Sardar Vallabhbhai Patel Institute Of Technology, Vasad	3114	727	623	86
38	047	Vyavasayi Vidya Pratishthans Sanch. College Of Engineering, Rajkot	1946	457	389	85
39	052	Central Institute Of Plastics Engineering & Technology, Vatva, Ahmedabad	347	84	69	83
40	002	Ahmedabad Institute Of Technology, Ahmedabad	1709	414	342	83
41	077	Silver Oak College Of Engineering & Technology, Ahmedabad	1793	436	359	82
42	067	Sal Institute Of Technology & Engineering Research, Ahmedabad	1575	389	315	81

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43	084	Faculty Of Engineering, Technology And Research. Bardoli, Surat	1267	317	253	80
44	057	Marwadi Education Foundations Group Of Institutions,rajkot	1618	405	324	80
45	049	Vidyabharti Trust, Institute Of Technology & Research Centre, Umrakh-bardoli	1523	383	305	80
46	045	Shri S-ad Vidya Mandal Institute Of Technology,bharuch	1800	453	360	79
47	004	B. H. Gardi College Of Engineering & Technology, Rajkot	1720	434	344	79
48	005	Babaria Institute Of Technology, Varnama	2409	614	482	78
49	056	Faculty Of Engineering, Grow More Foundation Group Of Institutions,berna, Himmatnagar	910	235	182	77
50	050	Sigma Institute Of Engineering, Vadodara	1508	394	302	77
51	079	Takshshila College Of Engineering & Technology, Rajkot	1371	360	274	76
52	042	Sarvajanik College Of Engineering & Technology, Surat	2136	561	427	76
53	039	S. P. B. Patel Engineering College, Mehsana	1451	384	290	76
54	003	Atmiya Institute Of Technology & Science, Rajkot	1845	491	369	75
55	001	A. D. Patel Institute Of Technology, Karamsad	2080	556	416	75
56	019	Government Engineering College, Valsad	1940	519	388	75
57	023	Government Engineering College, Surat	1233	333	247	74
58	015	Government Engineering College, Bhuj	2609	706	522	74
59	055	Engineering College, Tuwa, Godhara	1041	282	208	74

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60	051	Alpha College Of Engineering & Technology, Khatraj, Kalol	1461	402	292	73
61	033	Mahatma Gandhi Institute Of Technical Education & Research Centre, Navsari	1721	475	344	72
62	062	Gujarat Institute Of Technical Studies, Prantij	714	199	143	72
63	027	Kankeshwaridevi Institute Of Technology, Jamnagar	904	254	181	71
64	016	Government Engineering College, Modasa	3421	963	684	71
65	026	Kalol Institute Of Technology & Research Centre, Kalol	1507	427	301	71
66	058	Faculty Of Engineering, Shree Saraswati Edu. Sansthan Group Of Institutions, rajpur, Kadi	1178	339	236	69
67	060	Government Engineering College, Godhara	931	268	186	69
68	007	Birla Vishvakarma Mahavidyalaya, Vallabh Vidyanagar	2004	593	401	68
69	009	C. K. Pithawalla College Of Engineering & Technology, Surat	1384	412	277	67
70	025	Indus Institute Of Technology & Engineering, Ahmedabad	1762	531	352	66
71	036	Om Shanti Engineering College, Rajkot	1149	358	230	64
72	040	Sankalchand Patel College Of Engineering, Visnagar	1400	439	280	64
73	013	Government Engineering College, Sector - 28, Gandhinagar	2090	710	418	59
74	031	Lukhdhirji Engineering College, Morbi	1590	593	318	54
75	029	Lalajibhai Chaturbhai Institute Of Technology, Bhandu	977	375	195	52
76	017	Vishwakarma Government Engineering College, Chandkheda	2359	919	472	51
77	048	Valia Institute Of Technology, valia, Bharuch	717	293	143	49

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78	044	C. U. Shah College Of Engineering & Technology, Wadhwan	994	420	199	47
79	043	Shantilal Shah Engineering College, Bhavnagar	1935	834	387	46
80	022	Government Engineering College, Patan	1301	574	260	45
81	020	Government Engineering College, Rajkot	1400	638	280	44
82	018	Government Engineering College, Dahod	1106	523	221	42
83	028	L. D. College Of Engineering, Ahmedabad	2269	1387	454	33
84	021	Government Engineering College, Bhavnagar	900	650	180	28
85	061	Government Engineering College, Palanpur	287	221	57	26

**Annexure 2**

Sr. No.	College Code	College Name	Number of Patents reviewed	Total Number of Students registered after Phase 2	Number of students who have submitted PSAR Reports, Phase 3	Approximate percentage of the students in the college who have completed the task (%)
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2	016	Government Engineering College, Modasa	3421	963	684	71
3	041	Sardar Vallabhbhai Patel Institute Of Technology, Vasad	3114	727	623	86
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8	005	Babaria Institute Of Technology, Varnama	2409	614	482	78
9	017	Vishwakarma Government Engineering College, Chandkheda	2359	919	472	51
10	066	Sabar Institute Of Technology For Girls, Tajpur, Sabarkantha	2338	470	468	99
11	012	Gandhinagar Institute Of Technology, Gandhinagar	2314	524	463	88
12	076	Shri Swami Atmanand Saraswati Institute Of Technology, Surat	2270	459	454	99
13	028	L. D. College Of Engineering, Ahmedabad	2269	1387	454	33
4	032	L. J. Institute Of Engineering And Technology, Ahmedabad	2157	497	431	87
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		Studies And Research In Computer And Communication Technology				
17	013	Government Engineering College, Sector - 28, Gandhinagar	2090	710	418	59
18	001	A. D. Patel Institute Of Technology, Karamsad	2080	556	416	75
19	011	G. H. Patel College Of Engineering & Technology, V V Nagar	2038	463	408	88
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83	008	Birla Vishvakarma Mahavidyalaya, Vallabh Vidyanagar	568	132	114	86
84	052	Central Institute Of Plastics Engineering & Technology, Vatva, Ahmedabad	347	84	69	83
85	061	Government Engineering College, Palanpur	287	221	57	26

**Annexure 3**

Department Code	Department Name	Total Number of PSAR Reports related to IDP / UDP
01	Aeronautical Engineering	133
02	Automobile Engineering	1685
03	Bio Medical Engineering	671
04	Bio Technology	91
05	Chemical Engineering	3028
06	Civil Engineering	15010
07	Computer Engineering	19580
08	Electrical & Electronics Engineering	1294
09	Electrical Engineering	14533
10	Electronics Engineering	641
11	Electronics & Communication Engineering	25924
12	Electronics & Telecommunication Engineering	607
13	Environment Engineering	392
14	Food Processing Technology	261
16	Information Technology	12922
17	Instrumentation & Control Engineering	1657
19	Mechanical Engineering	31629
20	Mechatronics Engineering	320
21	Metallurgy Engineering	380
22	Mining Engineering	345
23	Plastic Technology	243
24	Power Electronics	205
25	Production Engineering	391
29	Textile Technology	42
31	Computer Science & Engineering	7567
32	Information & Communication Technology	250
34	Manufacturing Engineering	131