A Pioneering Integrated Circuit Design Program - High Volume Fast Track Hiring and Integration of Engineers

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Abstract

This paper will present a pioneering Hiring-Integration (HI) Program. First sector will illustrate a novel 12-month Graduate Trainee Program (GTP) – sourcing, selecting and hiring rightful candidates for design position. Second sector wraps up the program with a full fledge integration program which will be the core of this paper. Custom curricula comprise 3 phases with 127 courses 100% internally designed, developed and instructed. The combined total training hours stands at 368. Operations of the HI Program is championed and owned by a voluntary ‘Technical Integration Taskforce’. The results – 4-year average of 117 new hires ramped with average instructor effectiveness of 80% course effectiveness of 81.5% and use of training of 88.75%

1. Introduction

A design project requiring a mass of engineers is not acquired in weeks, rather months. The stiff battle is also taking on intellectual property sensitively and making outsourcing or consultation unfavorable. This paper will share a solution that resolves the problem statement as a pioneer Hiring-Integration Program. The program inherits the fruits of success from its predecessors [1], [2].

2. Hiring and Integration Program

Standard program hires fresh college graduates through conventional applications, university career fairs and referrals. This legacy hiring process poses the difficulty of accurate forecasting and fast opening job requisitions to hire the candidates. It is not uncommon for the department to face shortage of qualified engineers when the requisitions are opened at off college graduation cycles. The program did not permit job matching to take place and cases of mapping the wrong person to the less suitable job either brings about employee dissatisfaction or job performance issues. The current best know solution is the successful introduction and execution of the Graduate Trainee Program (GTP). First issue that the GTP tackled was the hiring pipeline as a trainee. It is one year in duration length, giving ample time for the graduate to pick up and be ready to take on immediate IC design positions. Having the one year as advantage, graduates can be retained and put to the job whenever positions are available. It is an opportunistic privilege for a graduate to gain invaluable training and design exposure. Mentors are assigned to coach the graduate whilst providing feedback to the manager for job assessment. Figure 2 shows the comparison of the Standard and GTP integration process flow.

Figure 1. Programs’ Integration

![Figure 1. Programs’ Integration](image-url)
3. Curricula Model

It comprises tuned courses in depth (of competence) and breadth (of scope) as pictured in Figure 2. In a nutshell, Phase 1a accounts for generic departmental organization, structure and systems. Phase 1b is required to supplement college engineering fundamentals due to the large knowledge gap between academia and industry. Secondary specialization is reflected in Phase 2, with part A touching on engineering functional areas and part B narrowing down to the job specific entities. Finally at the tip, aspects of project specific subjects such as device processes, architectures and specifications are covered. A digest of the curricula composition is propositioned as Table 1. Akin to the resourcefulness of colleges, the curricula boasts 127 courses 100% internally designed, developed and instructed. The combined total training hours stands at 368. No external training providers, consultants or professors were constituents of the curricula.

4. Results

Significance of the efforts invested in curricula development and implementation is shown in Figure 3. Figure 4 summarizes the information extracted from the training system tool. The goal of the integration portion has always been met with use of training hitting above the 80% threshold. The results – 4-year average of 117 new hires ramped with average instructor effectiveness of 80%, course effectiveness of 81.5% and use of training of 88.75%.

5. Conclusions

The data postulated in the results section speaks for itself in demonstrating the productiveness and success of the Graduate Trainee Program since its introduction in year 2002 and sample point ending in year 2005.

10. References
