

Ferris State University
College of Technology – HVACR Department

Internship within the HVACR Engineering Technology

The internship for HVAC&R Engineering Technology is a program designed to provide the student with a variety of system (Commercial & Industrial) and energy related experiences. This course has been placed between the third & fourth years so that the experiences gained may be applied to Senior year courses.

The following assignments would constitute an excellent internship: system design and retrofit, load calculation and system analysis or problem solving, system balance (testing, adjusting & balance), control balancing and control work, energy auditing and payback calculation and energy related experiences of all types on the commercial & industrial level.

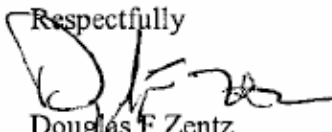
The approach at Ferris State University is to develop students who are *Systems* oriented. Students who have completed their Junior year of HVAC&R Engineering Technology have become familiar with codes & standards. They are capable of identifying HVAC systems and problems. They are capable of sizing piping and ductwork systems and can select pumps & fans for the given application. They have been exposed to testing & balancing of systems and controls. They are also capable of calculating heating & cooling loads both manually and through the use of computer software. They understand control logic and have working knowledge of control systems (pneumatic & electric). They know AutoCAD and their talents will make them a productive part of the work force during the internship period.

Our requirements of participating employers are simple: wages or salary is between the employer and the student but the student must be on the payroll for workman's compensation insurance purposes. Employers must provide a contact person who will be responsible for the evaluation of the student and will be willing to allow our coordinator to visit the student at his/her work site and to discuss the student's progress with the employer's designated contact person.

We have some eager students ready for a challenge. They are prepared to apply their HVAC knowledge and coursework to field experience.

We need your help. The success of our program is dependent upon the opportunities that our students are given to gain practical experience in the field. Remember, an intern is a perspective full time employee. We believe that this experience will be mutually beneficial.

Respectfully



Douglas F Zentz
Assistant Professor



Ferris State University
**HVACR
ENGINEERING
TECHNOLOGY**

INTERNSHIP GUIDELINES

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About Your Internship

This Student Internship Training Guide has been developed to make your internship a profitable and rewarding educational experience. It strives to answer questions that you may have and gives common guidelines for everyone to follow.

Comments and suggestions for improvements to this guide are welcome.

Introduction

Traditionally, most engineering technology programs are centered around classroom activities with little or no involvement as to what actually takes place in industry. The results of this, are students who are not fully prepared to face the world of work.

This separation between industry and education has resulted in courses or programs not being in tune with where the "state of the art" actually is.

This internship is an attempt to better prepare our students for employment and to keep up our program relevant and up to date. It is to this end that we at Ferris State University strive.

Philosophy

For any internship to be successful, the combined efforts of the training site, University and student are essential. Each party has an important function to fulfill and the combined efforts must be carefully coordinated. Furthermore, the training site must have a commitment and dedication to help educate the engineering professional of the future. This is the most critical factor that determines the success or failure of the internship program. This guide is provided to help the training site in fulfilling its essential function.

Intern's Responsibilities

In accordance with the University's policy statement for the operation of the internship program, each intern must be properly registered (*HVAC – 483*) and pay the scheduled rate of tuition.

Room, board and personal travel expenses are generally the responsibility of the interning student. Each intern must conduct his or her activities in accordance with regulations prescribed by Ferris State University and shall abide by the personnel requirements of the internship training site.

Rules Governing Internship

In order for the internship program to function and work successfully, a number of rules and procedures have been developed. The student is responsible to know and follow these rules.

- Students must be conscientious and work to the best of their ability.
- Any serious employment difficulties, or serious misunderstandings must be reported immediately to the intern coordinator.
- Interns are required to comply with all conditions of employment including rules of the employer, federal, state and local regulations.
- The training site supervisor must be notified immediately in the event a student is unable to report to work. If the absence from work extends more than three days, the intern coordinator must be notified.
- A student may not abandon a job! Employment can be terminated only after consultation with both the intern coordinator and the employer.
- Your status regarding financial aid, Veteran's benefits, etc. is your responsibility and you must check with any such office prior to going out on the job.
- *The internship experience is a paid work experience.* Typically, hourly wages are commensurate with duties performed, and are negotiated between the student and the employer.
- Students who do not conform to the rules may receive an unsatisfactory grade for the course thereby jeopardizing their potential for graduation.

Getting The Most Out Of Your Internship

Remember that this is a learning experience. How can you get the most out of your job? How can you succeed on the job? What can you do to establish a good on-the-job reputation? The answers to these questions are related. When you are able to answer one question, you will often find you will have an answer to another.

Before offering a number of suggestions, we presume that as an employee you (1) want to do a good job, and (2) are receptive to advice.

Most of our intern sites have been very eager to work with interns. Your supervisor understands that you are still learning and will help you adjust. Many students have a fear of failure which is generally unjustified. Do your best and everything will work out fine.

Training Site Responsibilities

The main function of the training site is to provide various opportunities for the intern to learn first hand about the HVACR Engineering profession. The training will vary from intern to intern as well as from company to company. Each site should, however, be able to provide appropriate training opportunities for the intern.

Orientation To The Training Site

The intern should be oriented to the organization and operation of the training site. Organizational charts, program plans, personnel regulation, procedure manuals and other pertinent material should be reviewed with the student during their first week.

The Importance of the Internship Program

To the employer:

- Opportunity to select and test talented professional personnel without a permanent commitment.
- Opportunity to preview prospective full-time employees over an extended period.
- Opportunity to participate in the student's career preparation.
- Reduces temporary work overloads.

To the student:

- Practical application of classroom studies.
- Accumulation of professional experience in their field.
- Help in determining general and specific career opportunities.
- Development of maturity, professionalism, self-confidence and decision making skills.
- Improved prospects of career employment and higher earnings potential upon graduation.
- Earnings help defray educational expenses.
- Develop an awareness of industrial realism.

To the faculty:

- Establishes rapport with the business, industrial and governmental community and the public at large.
- Enables students to gain practical experience while joining classroom theory with real world application.
- Improves student's academic performance in the classroom.

Definitions

Intern Coordinator - A member of the HVACR faculty who has the prime responsibility for supervision of the internship program.

Training Site – A company that agrees to provide a minimum of 10 weeks (400 hours) of training in HVACR Engineering Technology.

Ferris State University HVACR Internship Contract

This document is intended to be a working agreement between _____ (Student) and _____ (Company) as to the primary goals and expectations between both parties. It is expected that the student will perform the stated goals/objectives listed below and that the company will furnish support toward these goals/objectives. It is also expected that the basic intent of the 10 week internship will involve some knowledge/expertise learned from the 4 year HVACR program (examples: load estimating, controls, energy audit/management, cost estimating, pipe design, duct design or something else approved by the internship coordinator). The stated goals/objectives listed below should be jointly created by both the student & the company. It is expected that this document is to be billed out and faxed to the Ferris HVACR Internship coordinator prior to the start of the internship.

GOALS/OBJECTIVES

1.

2.

3.

The above is agreed upon by:

Student _____ Date: _____

Company Rep. _____ Date: _____

Internship Contact Information

Student: _____

Company: _____

Address: _____

Company Type: _____

Intern Supervisor: _____

Phone: _____

Fax: _____

E-Mail: _____

Notes: _____
