PROFESSIONAL DEVELOPMENT MANUAL

MANUAL FOR CHAPTER PROFESSIONAL DEVELOPMENT ΘΤ

Foreword

When first accepting the position of National Director of Professional Development, many questions were asked. What are the responsibilities of the National Director? What does professional development mean to Theta Tau? What is Professional Development? Once these questions were asked, one answer could not be given. Since the founding of Theta Tau, a clear direction for Professional Development has never been set.

Identifying the need to establish a course for professional development has resulted in the publication of this document. Defining Professional Development for the Fraternity at Large is the first goal of this manual.

The second intent is to assist active student members of Theta Tau, in the design of professional development activities. Guidelines in this manual will aid the Professional Development Chairman of each chapter in the planning of a long term strategy and short term activities.

Competition is the last objective of this manual. Friendly competition between chapters already exists. Outdoor games are held annually, and the enthusiasm of the members involved is unparalleled. Expanding on this inter-chapter rivalry by include professional development is but the next step. Several competitions aimed at challenging the professional abilities of active members are detailed in the latter half of this document.
Some of them focus on the individual while others are aimed at challenging a team.

Professional Development is a life long journey. Realize and embrace the opportunities that are presented to you and strive for continuous improvement in what ever endeavors you partake.

In H and T,

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Acknowledgments

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Contents

Revisions and Publication

This manual is intended to be living document and will be published with revisions during the first month of every year. Changes from the previous year's manual will be made in italics to assist the reader in identify changes from the previous edition. Revisions to the content of this document will be made with input from the Professional Development committee. Meetings will be held for this committee at the National Conference or National Convention. Electronic mail rosters will be updated with current information provided by Theta Tau Central Offices prior to publication. Each chapter is responsible for keeping this rosters up to date. Any input for this document is welcome and should be forwarded to the current National Director of Professional Development.

PROFESSIONAL DEVELOPMENT, MISSION, VISION, & GOALS

Professional Development Defined

Professional Development is preparation for a career and further advancement, while becoming a contributing member if society.

Mission

"The purpose of Theta Tau is to develop and maintain a high standard of professional interest among its members,..." This one statement, worded so concisely in *the Pledge and Membership Manual*, defines the core mission of Theta Tau. Every member is ultimately responsible for his or her development. Be that as it may, it is the duty of every chapter's Professional Development Chairmen to lead and assist his fellow members by making opportunities available.

Vision

The Vision of Theta Tau is that every member, both active and alumni, be instilled with a desire to strive for Professional Development throughout every stage of life.

Short Term Goals

National Level

1) Assist and encourage inter-chapter communication
2) Publish a handbook and calendar
3) Document professional activities of Theta Tau

Chapter Level

1) Document professional activities of the chapter
2) Spark the interest of every member within the chapter

Developing a Chapter Plan

"What must be done for my chapter to be successful in Professional Development?" This question, worded differently every time it is asked, has been the most common question posed by members of Theta Tau when discussing Professional Development. The answer, however, is just as broad as the question. In short, develop a plan. The answer does not just apply to Professional Development but all functions that make up a chapter. Expanded even further, this answer applies to business and the everyday functions of a professional engineer. Successful businesses know what they are doing, how they are doing it, and what their results are. They have a plan.

The approaches to planning, whether they be business, technical, or chapter, address the same general areas. Some guidelines are very detailed and complex while others are not. The intent of this section is to provide a basic guideline for planning that is flexible enough to meet the needs of all functions within a chapter and remain simple. Planning can be broken down into six steps.

1) Set a goal,
2) Determine how to measure success,
3) Define a basic strategy to meet the goal,
4) Develop activities that support the strategy,
5) Develop a timetable for the chosen activities,
6) Track progress, and
7) Report Results.

Each of these points will be discussed in detail. Use the flowchart at the end of this section as reference guide. A hypothetical example with comments is also included in this section to act as a guideline.

Be sure to document what you do as steps are completed. Write down plans and ideas, but do not write a novel. Chapters are dynamic. As positions change, it should be easy to tell who should do what. The attached example covers about a years worth of work yet covers about two pages.

Ideally, every step of the plan should be developed by a diverse team of people. This will not always be possible. Work with those who will influence the outcome of the plan the most, and always keep your chapter offices informed.

Setting a Goal

What do you need to accomplish? Identify a need. This applies to all aspects within the chapter. Meet with members in your chapter. Ask them what they need.

At this point it is easy to confuse a goal with activities and strategy. The worst mistake that is made when setting goals is setting actions instead. For example,

"We need to have talks about engineering."
"We need to go on a tour of a business."

Neither of these are goals. They are activities. A goal will and should sound vague. Be clear and concise. If a goal takes more than sentence, it is most likely addressing strategy and actions.

When setting goals do not do it in a vacuum with the input from only one person. Ideally get ideas from everyone, then prioritize the list. If chapter is very large, have a smaller diverse team composed of new and old members pursuing a wide range of degrees prioritize the list. Have the team present their work to the chapter for approval.

It is important to document ideas as you go. The house may come up with a list of 20 ideas. In a given year may only address the two most important. Do not loose the other 18. The chapter may address them next year.

Measuring Success

Effectiveness is difficult to measure. Graduate degrees are offered for this subject alone. In most cases success can not be measured directly. Attendance at a tour is easy to measure. Measuring the number of people who listened to the tour guide is a much harder to gauge. Be that as it may, method of measuring success must be determined or their is no way to know if any results have been obtained. Choose a method that:

1) is simple,
2) requires little data, and
3) is not time consuming.

Do not spend weeks trying to determine a better or more precise method of measuring success. Everything can be measured many ways, and it will almost always be a topic of debate. Choose one and use it.

Defining a Strategy

How will you meet your goal? Define a method. As with setting a goal, be careful not to confuse actions and activities with the strategy. A strategy statement should be more definitive that the goal without getting into specifics. Be clear and concise. If a strategy statement takes more than a paragraph, it is most likely addressing details.

Develop the strategy with a diverse team. Have the team present their work to the chapter. It may be beneficial to write the strategy statement in bullet or outline form.

Developing Activities

Once a goal is set and strategy defined, it should be easy to generate a long list of supporting activities. Several activities may address the same need. List each activity and estimate the time, money, and resources required for each. Work to meet the goal while using as little resources as possible. If several activities address the same need, choose the one that requires the least amount of resources.

Remember, someone has do the actions that are chosen. Some of the activities will fall on the shoulders of the chapter's Professional Development Chairman while others will require participation from the entire chapter. Try to choose activities that are appealing. The chapter may have make some of the less desirable activities mandatory.

Developing a Time Table

Once a list of supporting activities is completed, prepare a time table of actions. Include in the table supporting actions, not just the date of a given activity. If you are going to have a presentation open to anyone, include in the plan actions such as arrange room, put up posters, contact speaker, etc.

Assign someone to be responsible for each action. Even if many people are involved in a given action, assign one person as the champion who is ultimately responsible. Each action should have a completion date. Without a due date, an assignment will be put off forever. Be realistic when setting dates and assigning responsibility. Chapters are composed of students not employees.

Track Progress

Set a time frame for reviewing the plan's progress. Conduct meetings with the key people working on the plan. You may meet weekly or monthly depending on the demands. Track your progress. As activities are completed or progress is made, record results and comments. Some actions will be completed early. Others will be completed later than the target. If dates are consistently missed, it may be wise to reassign responsibilities or change the plan.

In addition to tracking the progress of the plan, track the progress of the goal. A method of measuring success should already be defined. Track your progress. In some cases the entire plan may have to completed before an attempt can be made at measuring success. In other cases, it may take years. In some cases, one might find that the goal is not being met. Go back and redefine the strategy. Take caution. Results come with time. Do not redefine and entire plan after a month because no results have been achieved.

ZETA ZETA CHAPTER
PROFESSIONAL DEVELOPMENT PLAN

GOAL - Instill effective interviewing skills in active members

METHOD OF MEASURE - Calculate the ratio of the number of job offers to the number of job interviews. (Measure the number of job interviews made by each member and the number of job offers for each member.)

STRATEGY -

Teach members

- what the purpose of an interview is ,
- what are the most common interview formats,
- what interviewers look for,
- what are the most asked question in an interview,

Offer practice interviews to members

ACTIVITIES

1) Watch video about interviews at College Placement Office.
2) Invite a guest speaker who interviews engineers.
3) Find and distribute list of most commonly asked interview questions.
4) Mock Interview Saturday

TIME TABLE

	Action	Responsibility	Due Date	Results
1	Set-up time and place to meet for chapter to watch video from placement office	P&D Chair	9/15/96	Completed 9/1/96, Planned for 10/3/96 at 3:00P.M. in room 101 of Engineering Hall
2	Chapter to watch Interviewing Video	Entire Chapter, Closed event	11/1/96	Completed on 10/3/96, 45% of chapter present
3	Find guest speaker who interviews engineers	P&D Chair	1/30/97	Completed 2/15/97, Representative from Acme Corp.
4	Set-up time and location for guest speaker's visit	P&D Chair	1/30/97	Planned for 3/5/97 at 6:30P.M. in room 101 of Engineering Hall
5	Guest Speaker	Entire chapter, open event	2/30/97	Completed 3/5/97, 80% of chapter present, 23 non-members attended
6	Find list of most commonly asked interview questions	P&D Chair	12/1/96	Internet search completed on 10/3/96 with no results, Article found in Nov. 95 issue of Fortune on 10/23/96
7	Copy list	P&D Chair	12/4/96	Completed on 10/25/96
8	Distribute list	Vice-Regent	12/5/96	Distributed at 10/29/96 chapter meeting

9	Set Date of Mock Interview Saturday	Mock Interview Team	1/15/96	Date set for 4/30/97
10	Send invitations to local alumni to act as interviewers	Scribe & Cor. Sec.	1/30/97	Invited to day of interviewing and spring formal, 37 invitations sent 2/9/97
11	Record alumni responses	Scribe & Cor. Sec.	3/30/97	12 responses returned, 6 alumni to attend 4/30/97 mock interviews, 9 to attend spring formal
12	Arrange location and time for Mock Interviews	P&D Chair	3/30/97	Completed 2/9/97, Date set for 4/30/97 at 9:00 A.M. in rooms 103 and 105 of Presidents Hall
13	Contact Interviewers to verify location and time	P&D Chair	4/15/97	Completed 4/15/97, on 4/28/97 bother Smith declined attending
14	Write mock interview guideline for Alumni	P&D Chair	4/30/97	Completed 4/28/95, includes agenda for day
15	Buy gifts for alumni participants	Business Manager	4/30/97	Completed 3/21/96, 6 sweat shirts purchases at $12 each, lunch also provided
16	Mock Interview Saturday	Entire Chapter, closed event	4/30/97	Completed 4/30/97, 4 Alumni attend, 75% chapter participation
17	Send Thank You Notes	Cor. Sec.	5/30/97	Completed 5/3/97
18	Write summary for Annual Report	P&D Chair	6/1/97	To be presented at 1997 National Convention

TRACK PROGRESS
Review meetings will be held on the first Monday of every month at 8:00 in lobby of Engineering's Hall until close of 1997 school year.

1995-96 school year offer to interview ratio = 4/16 = 0.25 (5 alumni contacted)
1996-97 school year offer to interview ratio = 8/24 = 0.33 (input by 6 members)
12 members involved have not yet been through interviews.
Continue to measure progress through 2000.

Comments to the Example

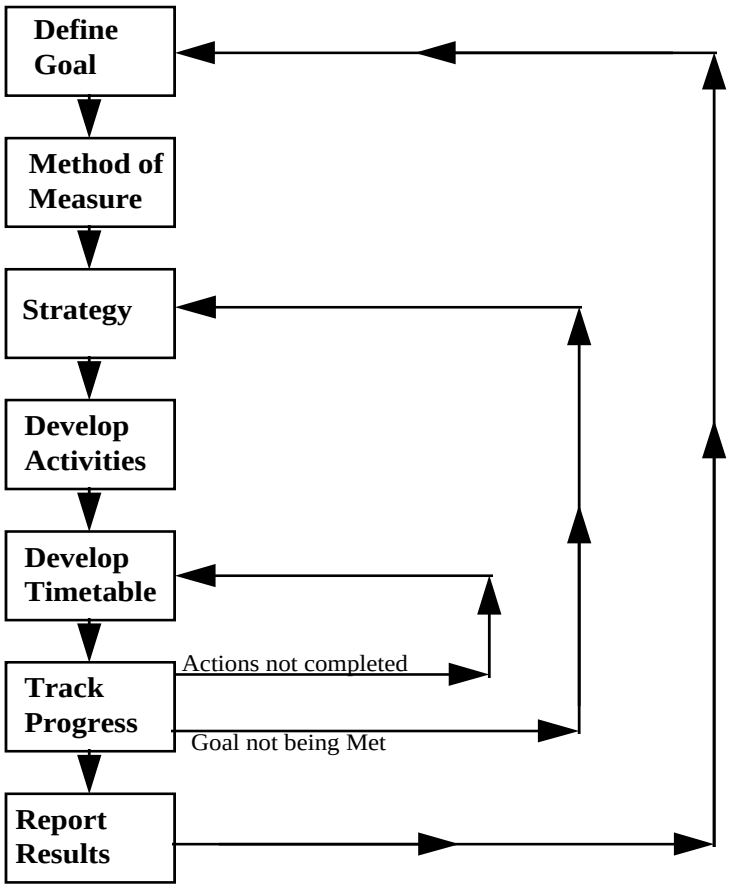
Goal – A brief statement vclealy defines what is to be accomplished
Measure – The chosen method attempts to directly measure results of the plan
Strategy – Summarizes how goals will be met
Activities – Four activities are listed which support the strategy
Timetable – Actions built around planned activities.
Tracking – Monthly meetings are planned to review timetable.
Results – Results are presented with data from the previous year for comparison

Report Results

Present a report to the chapter as each step of the plan is completed. Keep your chapter informed. Present clear concise information. When a plan is completed, close it with a report summary to the chapter. Report results regardless of the outcome. Not every plan will be a success. Reporting an unsuccessful plan will let members in the future know what should not be done. In all cases, be sure to congratulate key people who put effort and work into making a plan a success.

Report your plans and results to other chapters. Let your friends and rivals know what you have accomplished. Let the Nationals Officers and Regional Directors know that your chapter is active. Send a report through E-mail with a huge distribution list. Also, do not forget to include a summary in your chapter's Annual Report.

Planning Flow Chart



National Engineers Week

During the week of President George Washington's birthday, National Engineers Week is held to honor innovation and technological accomplishments. This event is a coordinated effort by many engineering organizations whose purpose is to increase public awareness of engineering's contributions to our quality of life.

The National Officers of Theta Tau support these efforts and encourage all chapters to recognize this week as an opportunity to expand the understanding of engineering's impact on the world. The Professional Development Chairman is responsible for leading chapter activities related to Engineers Week.

Before working to increase public awareness, each chapter should expand the understanding of its members. One option, that requires few resources, is to show a video about technology every night during Engineers Week. Several excellent documentaries may be available at the library. James Burke has produced a series of entertaining programs reviewing the history of technological innovation such as Connections, The Day the Universe Changed, and Connections2.

National Engineers Week Headquarters suggests increasing public awareness by working with the local media and by building displays for show at shopping malls. Most chapters do not have the resources or contacts to take on such endeavors alone. Members may consider working with professional organizations to accomplish these activities.

A chapter may stimulate awareness by posting fliers with brief statements about engineering in public places. For example,

> "Engineers have made word processing possible." - posted in the English Department computer lab.
> "You can drive home today because of the work of engineers." - placed under the windshield wiper of parked cars.

Ask each member to post a dozen fliers every day during Engineers Week. Such signs will stimulate thought while utilizing few chapter resources.

More information concerning National Engineers Week can be found on the internet by accessing the Society of Manufacturing Engineers Home Page at *http://www.eweek.org*

Identifying Professional Development Activities

Whether or not a chapter wishes to meet a specific goal or just have dynamic professional development events, activities must be identified that will support both of these approaches. As defined earlier in this manual, professional development is preparation for a career and further advancement, while becoming a contributing member of society. Preparation for a career is the key phrase to this definition, and a career requires individuals to develop skills that are valuable to an employer. Professional development activities should focus on meeting this objective.

Below is a brief matrix which may assist in identifying how an activity addresses professional skills. Write an idea for an activity at the top of the matrix. On the vertical axis is a listing of professional skills grouped into five major areas. Rate the activity in relation to each skill by placing a number in the corresponding box and totaling the score.

Rating System

0 - activity has no connection to the skill
3 - activity address the skill
9 - strong correlation between the skill and activity

PROFESSIONAL SKILLS	POSSIBLE ACTIVITIES	
COMMUNICATION		
A) Oral		
B) Written		
C) Visual		
EVALUATION		
A) Self-Evaluation		
B) Auditing Others		
PLANNING		
A) Project		
B) Time Management		
C) Continuous Improvement		
SOCIAL INTERACTION		
A) Interviewing		
B) Teamwork		
C) Ethics		
TECHNICAL		
A) Analysis		
B) Design		
C) Scientific		
RATING TOTAL		

Rating Total

Major professional skills are found in the matrix. The list is not intended to be comprehensive. Be sure to rate only the activity that will involve the chapter a whole. After performing this analysis several times, do not be discouraged if most activities have low scores and address only one or two areas. This analysis method, however, will show how different activities overlap.

Work with members of the chapter to generate a list of activities. Several activities may address the same skills. Choose the activities that require the least amount of time, money, and preparation without sacrificing quality. Also, try to choose activities that are appealing. People must attend an event for them to gain benefits from it.

Brainstormed Ideas of Professional Development Committee, 1995 Conference

speakers
alumni involvement -invite them to speak
etiquette
how to dress
read Robert's Rules of Order
projects for pledges
co-op and project talks
tours
faculty speakers
computer workshops
inter-disciplinary trade of information
use internal resources
brother's specialties
presentation skills
use FOOD at P & D
philanthropy
dinners
risk management
dealing with stress/.learning to relax
goal setting
organizational skills
financial planning
volunteer services with administration
sexual harassment
EIT/PT
study skills
outreach to community
rube goldberg
National engineer's week
read professional groups email

The Annual Report and the Schrader Award

56 items make up the seven page Annual Report which should be completed by every chapter between April 1 and May 1. Out of this, a total of 7 items are classified as professional. Of those 7, only 5 are used in scoring for the Schrader Award. These 5 questions make up 27% of a chapter's score. The scoring guidelines used by the National Officer's are:

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1. **PROFESSIONAL** (Maximum Total: 270)

A. Speakers, tours, etc. (Annual Report Item 7) 50
7 points foe each closed event; 9 for each open to campus

B. Other professional activities & projects (Annual Report Item 8) 40
Based on number of programs, including self-evaluation, and percent participation
Program 1 x % participation x 20; Program 2 x % participation x 20
(Max. 20 for extension efforts) (Max. 20 for OSM self-evaluation)

C. Professional technical societies (Annual Report Item 9) 60
Percentage of members belonging x 40, 4 pts. for each officer (max. 20)

D. Honor Societies (Annual Report Item 10) 50
Percentage of members x 40, 2 pts. for each officer (max. 10)

E. Scholarship (Annual Report Item 11) 70
(Chapter GPA / value of an A at its school) x 70

Every Chapter's Professional Development Chairman is responsible for knowing the answer of each of these items. The goal of every chapter should be to get the maximum number of points, and the Professional Development Chairman should take the lead in maxing out the five items classified as professional.

Annual Report Item 7

8 talks, tours, or other similar activities are required to get 50 points in this section. If every activity is open, only 6 are needed. A talk about summer co-op experiences given once a week by active members would earn 40 points in this section in half a semester.

Annual Report Item 8

One chapter plan would be earn 20 points for this question if the entire chapter participated. OSM is the abbreviation for Outstanding Student Member. The second 20 points would be earned if every member filled out the OSM self-evaluation form. Dedicate 15 minutes of a chapter meeting to completing this assignment as group. Attach

the filled out self-evaluations and a chapter plan summary (even if a project is not complete) to the Annual Report.

Annual Report Item 9

Every member student should be involved with the professional organization related to their major. Student memberships are much less than those paid by professional members. In some cases memberships cost less a beer. There is no excuse for a chapter not getting 40 points in this section. Attending meetings for these organizations is encouraged, but it is not a requirement.

Student chapters are for professional organizations often are very competitive when selecting officers. Professional chapters, however, usually do not have active student participation. Becoming the student delegate to a professional chapter is an option that is often overlooked.

Annual Report Item 10

Two types of honorary societies exist: scholastic and merit. Members who have high grade point averages in many cases will be invited to join a scholastic honorary society. Members who do not have high grade point averages should be encouraged to apply to merit societies. Many of these merit societies look for students who are active outside of class. Being a member of Theta Tau is one of those outside of class activities.

Annual Report Item 11

Grades are hard to influence. Know where your chapter stands without posting grades. Little can be done by a Professional Development Chairman to affect a chapter's grades directly. Be that as it may, opportunities and motivation should be created for scholastic improvement.

Do not make this section so important that members purposely take easy classes and limit the recruit pledges to only those that have good grades. In the engineering world, a C in Fluid Flow Dynamics is worth more than an A in archery, and most people successful in industry did not have a 4.0 when they were in college.

Documentation

Document what your chapter does events take place while keeping in mind the criterion that is used in scoring the Schrader Award. The Annual Report does not mandate that all information must fit in the small space provided. Attach summaries if you need extra space. If you have already prepared a summary for some other reason, reuse it.

Chapter Plan Competition

Purpose: challenge chapers of Theta Tau to meet goals through planning.

Awards: First, Second, and Third Place honors will be awarded at the 1996 National Convention.

Scope: all active student chapters of Theta Tau in good standing. Multiple entries may be made per chapter. Joint chapter entries are acceptable.

Entry Requirements:

Plan - A plan should be prepared following the guideline set for in this manual. The goal set for the plan may apply to any aspect of a chapter's function including professional development and rushing. The plan may be at any state of completion at the time of submission.

Text - The plan must be presented as a written document, neatly typed or printed in black, double spaced, with 1" margins on standard 8 1/2" x 11" paper. Handwritten entries will be disqualified. The Text should be at least one and no more than five pages in length. The structure of the plan should be similar to the example presented in this manual. Improvements to the example are encouraged.

Cover Page - Attached to the complete document should be a cover page with the title, chapter or colony affiliation, address, and the phone numberof a key contact.

Judging Criterion:

50% Content of Plan
25% Originality and Creativity
25% Clarity of Expression

Technical Paper Competition

Purpose: challenge members of Theta Tau to excell at professional writing.

Awards: First, Second, and Third Place honors will be awarded at the 1996 National Convention.

Scope: all active student members of Theta Tau in good standing. Multiple entries may be made per individual. No joint entries are acceptable.

Entry Requirements:

Subject - The subject of the paper should be related to engineering, science, or business. Papers written for other competitions or to complete course work are acceptable.

Text - The text must be neatly typed or printed in black, double spaced, with 1" margins on standard 8 1/2" x 11" paper. Handwritten entries will be disqualified. The Text should be at least two and no more than ten pages in lenth. The structure of the text is to be professional. Headings or section numbering are allowed, but are not required. Included in the text must be a summary, statement of purpose, and lessons learned. Start the text with a title.

Figures - Attached figures in the form of graphs, tables, charts, photographs, or other are acceptable. Attached figures should not exceed a total ten and be no less than two.

Cover Page - Attached to the complete document should be a cover page with the title, author, chapter or colony affiliation, address of the chapter, address of the entrant, and phone numberof the entrant. The author's name should not be found any where else in the document.

Judging Criterion:

25% Knowledge Acheived about Subject
25% Clarity of Expression, including spelling and grammat
25% Clarity of Figures
25% Originality and Creativity

Design/Invention Competition

Purpose: challenge members of Theta Tau to improve upon current technology by using scientific and engineering skills.

Awards: First, Second, and Third Place honors will be awarded at the 1996 National Convention.

Scope: all active student members of Theta Tau in good standing. Multiple entries may be made per individual. No joint entries are acceptable.

Entry Requirements:

Design/Invention - Any original idea for a new invention or an improvement on current technology may be submitted as an entry in this competition.

Summary - A written summary of the design or invention is to neatly typed or printed in black, double spaced, with 1" margins on standard 8 1/2" x 11" paper. Handwritten entries will be disqualified. Start the text with a title. Address the following topics in the summary:

1) Explain the funtion of the design/invention. What does it do?
2) Explain the mechanics of the design/invention. How does it work?
3) State of how the design/invention improves on current comparable technology. If no such technology exists, eplain why there is a need.
4) State how the idea for this invention or design originated.

The Text should be at least two and no more than four pages in length.

Figures - Attach at least two and no more than ten figures to aid in the description of the design/invention.

Cover Page - Attached to the complete document should be a cover page with the title, author, chapter or colony affiliation, address of the chapter, address of the entrant, and phone numberof the entrant. The author's name should not be found any where else in the entry.

Judging Criterion:

75% Originality and Creativity
15% Clarity of Expression, including spelling and grammat
10% Clarity of Figures