The Myers-Briggs Type Indicator (MBTI) is a system for understanding differences in personality. It is a tool that can explain differences in behavior and perspective. In MBTI terminology, there are no right and wrong or no better or worse differences – difference is just difference.

You may ask, “Why should I care about personality types? I’m just an engineering student.” However, understanding yourself will help you to understand how you learn and to understand the differences in your style and the style of those around you. In fact, you will learn that the majority of engineers fit into a particular style. However, make no mistake, engineering has room for every style – it just might feel a little friendlier to those who are like the majority. A room always feels friendlier when you match up with most of the people in it!

About the Myers Briggs Types
The Myers-Briggs types are based on the theory that all of us are born into the world with preferences. A preference is simply a preferred way of doing things or a tendency – the way you tend to do things. However, a tendency or preference does not mean it is the only way of behaving. For instance, you may have a preference for certain foods – but that doesn’t mean you don’t eat other foods. The Myers-Briggs types are based on four preferences. These preferences are not opposites, but they do span a sort of continuum. A person can be a lot extraverted or a little extraverted, and the same can be said for all of the preferences.

Extraversion (E) and Introversion (I)
Sensing (S) and iNtuition (N)
Thinking (T) and Feeling (F)
Judging (J) and Perceiving (P)

Extraversion (E) and Introversion (I)
Extraversion (E) and Introversion (I) refer to preferences of how a person chooses to interact with the world and where they get energy. Often an extravert is defined as someone who “never meets a stranger,” while an introvert is defined as someone who “stays away from people.” Neither of these definitions is an accurate description of these preferences.

For instance, an extravert may talk quickly, while an introvert may rehearse before speaking. The extraverted student is the one that raises their hand before the teacher has finished asking the question, while the introvert may only answer when called upon.

With regard to how people get energy, an extravert becomes more energized as there is more interaction with people, and loses energy if thinking alone. The introvert is worn out at the end of interacting with lots of people, and becomes energized with private time.
**Sensing (S) and iNtuition (N)**
Sensing and Intuition have to do with how a person gathers data.

The sensing person is focused on the “here and now.” Sensing people are interested in concrete answers and prefer specific details and facts.

Intuitive people are characterized by thinking about the future and all of the “what ifs.” They prefer abstract thinking, and become bored with facts and details.

**Thinking (T) and Feeling (F)**
Thinking and Feeling have to do with how people make decisions.

Thinkers base their decisions on logic and fairness. They are more concerned with the absolute truth than with being liked, and don’t have emotions about situations – they resolve them with logic. Thinkers will engage in conflict if that’s what it takes to prove their point.

Feelers are more concerned with if everyone is happy at the conclusion of a decision rather than if the right decision was made – in fact, the right decision is the one that satisfied everyone! Feelers avoid conflict since they are more concerned with the relationships between people.

**Judging (J) and Perceiving (P)**
Judging and Perceiving have to do with lifestyle orientation. This preference has perhaps the least descriptive names, because it has nothing to do with being judgmental or perceptive.

Judgers are scheduled. They prefer life to be planned and orderly. They don’t like change, and are anxious to get things executed and finished. They are dependable and responsible.

Perceivers are spontaneous, flexible and adaptable. In fact, they won’t make a decision until the very last minute so that they can gather all their options and make the best decision. Perceivers make any task into fun and like to be creative and spontaneous in accomplishing it – at the last minute!

**The Myers-Briggs Types**
The Myers-Briggs Types are made up of all the combinations of the preferences. There are sixteen preferences plus preferences where a person is neither one nor the other of a preference. For instance, a set of combinations could be:

- ESTJ
- ISTJ
- XSTJ
where the only difference is between the extroversion and introversion preference.

**The Sixteen Types**

The sixteen types and a brief description of their preferences follow. Notice that none of these are better than any other – they are just different.

**ESTJ**

ESTJs run the world (or try to!). They are natural administrators, seeing the present and logically structuring what to do next. As extroverts, they don’t mind telling everyone else what to do next. Their strength lies in their ability to execute and direct. They logically organize projects, and are not distracted by all the possibilities. They must guard against missing out on new ideas, simply because they already have a plan in hand.

**ISTJ**

ISTJ is the most common type among practicing engineers. They are usually quiet and can appear withdrawn because of the I, but most of them make good use of their quiet time by thinking of ideas and how facts go together. As S’s, they concentrate on executing the job at hand, using logic (a T trait) to figure out the solution. Their J preference enables them to schedule and plan ahead, and they don’t like to have to adapt and change once they start down a path. ISTJs are dependable, organized, goal-oriented, and focused on the facts.

**ENTJ**

ENTJs are leaders. The combination of enthusiasm for people, mixed with a structured, logical array of ideas makes them a natural for a leadership role. However, the ENTJ must guard against expressing their ideas without regard for other people. Just because it makes sense to them and they are good at expressing themselves, doesn’t necessarily mean that a less verbal person might not have something to contribute.

**INTJ**

INTJs combine their love of personal reflection with a structured and logical assembly of endless possibilities. They excel at coming up with new schemes. However, their structure and logic can make them self-assured and righteous about their ideas. If they aren’t careful to consider others in the group, they may not be heard – simply because of how they present their ideas.

**ESFJ**

ESFJs are likeable, practical, and enthusiastic. They are good at organizing while accommodating others. They have a sense of what is good and right, but can become upset if others violate this perception. ESFJs must watch that they don’t back down in conflict just to soothe another’s feelings.

**ISFJ**

ISFJs are conscientious, loyal, and dependable. They are quiet, but friendly, and enjoy serving others. They have high expectations of themselves and those around them, and
will pitch in for the good of the group. However, watch out, ISFJs can get so busy helping others for the good of the group that they become overextended and then can become very rules oriented and task focused – even if they have the wrong vision of the task.

**ENFJ**
ENFJs are charismatic and persuasive. They are full of new ideas, and can express them in a manner that can convince other people to follow. They are good at scheduling and meeting deadlines. ENFJs must watch that they don’t take criticism personally.

**INFJ**
INFJs are inspirational leaders, and often use their reflective and abstract preferences to find countless possibilities. When their F preference kicks in, they can react to other’s feelings to involve the whole group. They have a strong need for harmony, and are dependable and conscientious. INFJs have a strong sense of ideals, and can become frustrated when those ideals are not considered. They also have a tendency to make simple things more complex than needed, and can overreact to seemingly trivial situations.

**ESTP**
ESTPs are risk-takers who are on the go. They like adventure, and have lots of energy. They are realistic and pragmatic. They like people and doing things. They don’t have time for a lot of dialog, rather they want to cut to the chase and get on with it. However, their love of adventure can cause them to be undependable, waiting for the last minute to get things done. They become frustrated with routine, and can cause the rest of the group to become upset with their impatience and lack of accountability. Get them involved and interested, and they can accomplish a lot.

**ISTP**
ISTPs are on the move. They like adventure, and often have an unusual way of doing things. This combination of inward logical thinking with a final decision at the last minute can be frustrating to those around them. They can prefer to work alone, executing their plan without consideration for involving the others in the group.

**ENTP**
ENTPs like excitement. They love to banter and argue, but may drop what they’re doing as soon as something more exciting comes along. They are logical to a fault and can alienate the rest of their group with their high-energy logic and possibilities.

**INTP**
INTPs are creative and easygoing, as they respond to the moment, using logic and ideas. However, they can be easily distracted by all of the things going on around them. They can be very analytic, and their natural curiosity (that has no time bounds) enables them to find flaws and discrepancies in logical situations. They must guard against alienating others with their boundless pursuit of the truth without regard for other’s feelings.
**ENFP**
ENFPs are social animals who are generally good at communicating. They are enthusiastic and can persuade other people to join in. They revel in the people possibilities, and adapt to changes as they go. They must be careful not to get so involved with the relationships of the moment that they neglect routine chores.

**INFP**
The INFP isn’t happy if what they are doing doesn’t have a higher meaning of an ideal or service. The INFP will become bored with the same old thing unless it can be translated into serving a greater cause. INFPs like the abstract, and excel at getting others to buy into new ideas. However, they often withdraw in conflict and can overreact to difficult situations.

**ESFP**
ESFPs are happy-go-lucky characters that turn everything into fun. They love people and a party, and spontaneously respond to situations that promise lots of interaction. They must guard against becoming over-involved with people activities that are fun to the exclusion of task activities. In fact, the ESFP is likely to just drop anything that can’t be turned into fun.

**ISFP**
ISFPs are interested in service. They look at the world around them and relate to immediate needs of other people. They strive for harmony, and are often uncomfortable in conflict or when people disagree. They can become upset when others are not accountable, even if it is not their doing. ISFPs have to be careful because they would rather be working on something new than finishing old business. They thrive on immediate feedback and encouragement, losing interest if they don’t know the status of their results. Their manner of getting things done usually doesn’t make sense to other types, and can cause problems if the ISFP doesn’t make it a point to communicate what they are doing.

**Why Learn about Myers-Briggs Types?**

You may be asking, “Why do I care about these types? I’m not a psychology major.”

Understanding types – your type and the type of others around you can explain differences. Understanding types can help you as a student by explaining how you learn and how your professors are presenting material. It can also help you understand your teammates.

*Learning Styles*
Learning style is perhaps most affected by the Sensing – iNtuition preference. Sensing types like things to be specific and concrete, while intuitives like the abstract and “what ifs.” Sensors are interested in details and “right now,” while intuitives like to think about the big picture and generalizations.
Research indicates that most professors in math and science are INTJs, or intuitive types. This type means that their preference for presenting material will be to:

- Talk about the subject matter in an abstract sense (use theorems and derivations instead of working real problems)
- May show a variety of ways to do the same thing
- May never completely work a problem out in detail
- May never ask the class how it’s going – as a Thinker, they logically have presented the material, so everyone must understand it!

So let’s consider what this means to you as a student. First, if you are a Sensor, you will be confused and frustrated by the presentation of the material in an abstract way. It won’t make sense to you because you need to see concrete problems. You don’t learn from the derivation and the theorems. And to top it off, when the professor does work a problem on the board, you need to see every step. Remember intuitives are bored with details, so the professor will leave out the details and not do the final calculations – the problem will only be set-up. Don’t feel foolish or stupid to ask for details or to go to help sessions where you can get problems completely worked out. Remember that the professor is simply trying not to bore students with details because they are so boring to them!

If you are a feeler, remember that the professor is logically marching through the material. Whether you like it or not, and whether you find it interesting or not is of no matter to a Thinker – they have a logical system (to them…) for teaching the material, so what they are doing must be right!

Working with your teammates - TypeTalk
Remember, everyone has a type. You and your team members have different types, and those differences can be used to create a well-rounded team, or they can become reasons to crash and burn.

Many teams use the Myers-Briggs types to discuss their differences. For instance, in the EFD staff meetings, we often remind each other of how our preferences can affect the others. Any time those of us who are Perceivers have a due date, we usually get reminded that doing it at the last minute may work for us, but the rest of the team needs more time (Actually the Judgers just aren’t comfortable with all of the changing and uncertainty associated with how Perceivers do work.) We remind the Judgers that change isn’t bad, and the iNtuitives that at some point we have to get down to business and quit talking about all of the possibilities.

Each of these preferences is a talent that has a place in a well-rounded team. You can either maximize your team’s performance by using what every person does best, or you can have conflict because everyone has a different style. We encourage you to use TypeTalk to discuss and understand differences. It can provide a way to laugh at each other rather than point fingers and criticize.
Remember the following about the preferences:

<table>
<thead>
<tr>
<th>Extraversion</th>
<th>Introversion</th>
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</thead>
<tbody>
<tr>
<td>• Gets energy from other people and will be more than happy to see the team</td>
<td>• Gets energy from inside themselves – a group of talkers will wear them out</td>
</tr>
<tr>
<td>meeting as a chance to talk</td>
<td>• Even though they have ideas, they may hold back in presenting them</td>
</tr>
<tr>
<td>• Will have no problem in asking questions or doing the presentations</td>
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Be prepared to ask them to let other people talk without interrupting.

<table>
<thead>
<tr>
<th>Sensing</th>
<th>iNtuition</th>
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<tbody>
<tr>
<td>• Like to execute a plan</td>
<td>• like to think of all the possibilities</td>
</tr>
<tr>
<td>• Rather do what needs to be done right now than think about tomorrow</td>
<td>• rather think of what’s next instead of what should be done right now</td>
</tr>
<tr>
<td>• Like details and specifics</td>
<td>• get bored with details and specifics</td>
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Get them to let the intuitives be creative on the front end by generating ideas. They will want to get right to work before stepping back and thinking of the possibilities.

<table>
<thead>
<tr>
<th>Thinking</th>
<th>Feeling</th>
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<tbody>
<tr>
<td>• will only consider the logic of getting the project done</td>
<td>• are concerned with how the group interacts</td>
</tr>
<tr>
<td>• see team dynamics as a waste of time – they want to get on with the task</td>
<td>• see the problem as more that a technical challenge</td>
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<td></td>
<td>• don’t like conflict because it represents a lack of harmony in the team</td>
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Use their logic to layout the project. Help them remember that even if they have a good idea, it won’t work unless the other team members buy into it.

<table>
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<tr>
<th>Judging</th>
<th>Perceiving</th>
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<tr>
<td>• Want to plan out the whole project and stay on schedule</td>
<td>• Will want to hold off until the last minute to make any decisions</td>
</tr>
<tr>
<td>• Will decide how long something will take and be frustrated if it takes longer</td>
<td>• Once they start working on a project, it’s hard to get them to do something else</td>
</tr>
<tr>
<td>• Like to make decisions and then stick to them, change and flexibility drive them crazy</td>
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</table>

Remind them that the best plans change and the goal is to get the project done, not to work to their schedule. Support them in setting a schedule of meeting times & places.

Remind them that the team is more than just them and that the project can’t be completed at the last minute because of schedule conflicts. Remember that if they are working on another class, they will focus on it. Ask them for part of their time to work on this project.