

Top 11 Tips for Coaching a Tomorrow's Engineers

Robotics Team:

When I was originally asked if I wanted to coach a robotics team, I had absolutely no idea how I was going to approach the task. I had no previous experience in teaching or coaching and didn't know what to expect from being a coach. That being said, I've now lead a robotics team from formation to competition and have compiled a list of tips for coaches that I feel play a crucial part in making your robotics team successful.

Tip One: Be open-minded

Some of your mentees' ideas may sound absolutely ridiculous when you first hear them, but don't dismiss them, this is their competition after all. If you dismiss an idea, you will never know how that idea could have developed – it could even be the idea that mesmerises the judges at the competition. Let your team members' ideas develop as they do, if they decide it's worthwhile, support it.

Tip Two: Don't abuse your power

Make your conversation with each mentee customised to their interests – appreciate each of your mentees individuality and unique personality and let them know that they don't have to be anyone else but themselves. Don't talk at them like a lecture-presenter, you can only "teach" the basics and the rest is ideas. Don't make yourself seem like a person of authority, make yourself part of the team.

Tip Three: Find Common interest points

In the team that I coach, all mentees and I share a common interest point – Harry Potter. This common interest point allowed all of us to have a theme for conversation and especially in the early days of my coaching of them, it helped our atmosphere to be more friendly rather than awkward and class-like. Your robotics meetings should not be class-like, it should be fun.

Tip Four: Let them know that they're doing well

There's nothing worse than doing something that you're proud of and then having it underappreciated or devalued. If a mentee has put obvious effort into something, acknowledge it. Don't leave them feeling like their work is worthless.

Tip Five: Don't over-assist

One mistake that I'm definitely guilty of making is over-assisting mentees. If I knew how to do a particular task, I sometimes would tell them how to do it completely. This is a mistake I most definitely learned from, mostly because telling them how to do something didn't help them remember it at all. I found that introducing a task with as little required information as possible made a huge impact as to their remembering of what the aspects of the task entailed. Plus, it's also much more rewarding when you work something out for yourself.

Tip Six: Don't go into the competition to win

High expectations for yourself (as a coach) are good, but don't force high expectations upon your team members. Competitions are supposed to be fun for the team, not stressful. Don't make your team members feel like they have to win, because you don't have any hints as to who is going to be competitors on the same day that you are. As long as everyone has given it their all, that should be as much as you can ask.

Tip Seven: Be Nice

Everyone had a teacher during their school-life who terrified the living daylights out of them, do not be that scary teacher. In my eyes, a coach is supposed to encourage their mentees, be a person who they know that they can go to for help – even if perhaps it has absolutely nothing to do with robotics! An approachable, friendly face that is always there for their team when they need them, not someone that they dread to see.

Tip Eight: Be a member of the team

Just as they do as you ask, sometimes, you might have to take one for the team. At one of the robotics competitions that I have been to in the past, coaches were asked to allow their team members to dress them up as a robot and then have a dance-off. You may have to do some things that you hate every second of, but if your team have listened to you, do the same for them.

Tip Nine: Be Enthusiastic

I'm a firm believer that you should only teach something if you enjoy it. A coach who is unenthusiastic about robotics will not have the desire to investigate fields of robotics in their own, free time. The more enthusiastic you are about what you're coaching, the more you will encourage your team members to be enthusiastic about robotics and expand their knowledge of it in their own time.

Tip Ten: Care

Care about each of your team members, care about your purpose and intentions and care about robotics. With a passion for your field of coaching and your team members' wellbeing and enjoyment in your best interest, your team will be set for a robotics season to remember!

Tip Eleven: Don't make others' mistakes

If in your school-life, you had a teacher that you really did not like the teaching style of, do not make their mistakes. Develop your own style of coaching that takes the best aspects of others' teaching and does not include the aspects that you didn't enjoy.

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