PEAK OF FLIGHT NEWSLETTER

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Building a Rocketry Club

By David Heitmeyer

When I began my journey of building small scale Estes rockets I never imagined that it would lead to starting an engineering competition team at a large university. I just wanted to see stuff fly! So, how did I start a team that has now competed at IREC and expanded into nearby universities? Good question!

With a passion for rocketry and surrounded by thousands of other students I felt that I needed to share that passion. It's a journey that is both rewarding and difficult. For anyone starting where I did it will be a journey of building the foundation of the team so that future members can build the structure. Here are some of the primary steps needed to accomplish it:

Get help from teachers

Get in touch with professors! Many universities require professor sponsorship. Networking with professors allows you to request speaking in front of their classes and asking for their advice. Many professors have already been sponsors for engineering teams and understand how to build the foundation!

Get help from club directors

Contact the university's head of student clubs. They will have lots of information to guide you! They were invaluable to me as I set up club financing, got the team included in department newsletters, and for a lot of my general 'administrative' questions.

Figure 1: Humble Beginnings – First Club Fair Table (Pictured from left to right are Colten Smith, founding vice president, and David Heitmeyer, founding president)

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About this Newsletter

You can subscribe to receive this e-zine FREE at the Apogee Components website **www.ApogeeComponents.com**, or by clicking the link here Newsletter Sign-Up

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Sign up for 'Club Day'

I can't imagine a university that doesn't have a 'club day' that allows you to recruit members by showing off what you're offering at a table. Sign up! Be prepared to have something to show. For my first club day all I had was small power rockets and some well made posters describing future goals and how they'd be accomplished. You'll be amazed at how many are interested in rocketry! Don't forget my first tip, request to speak in front of large courses about your team and pass around a sign-up sheet.

Find launch site

You'll need a local launch and test site. This is can be hard to establish. You may have a local rocket club. If not, ask members if they have family or friends willing to share their land. Contact the local director of public parks to ask if they allow low power launches.

Safety first

Are you planning on one day building your own high power rocket motors? Oh boy, now things get tough! Develop a comprehensive safety document including failure mode analysis. This isn't just to get it started; you should never develop

Figure 2: CATO at the first club launch

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any propulsion project without the utmost respect of human life and safety. Don't even think about this unless you're ready to explore the chemicals involved, their dangers, and how to protect against them.

Contact the university safety officer (or similar title) as well as the city fire marshal. Involve the head of your university department as well. Don't lose hope! From personal experience this step can reach the president of the university, stir up discussion, and potentially be blocked. Decisions may be reversed after several successful club years. Regardless, never go beyond your university rules, you can always purchase motors!

Get funding

Most university engineering teams are funded by the university. Ask your department office how the process works and then set up a meeting with the department head to request funding. Be prepared to explain your purpose, what com-

Figure 3: Preparing a rocket for launch (Pictured left to right are founder David Heitmeyer and co-founder Colten Smith).

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petition you're aiming for, and roughly how much it will cost – start small!

You can set up fundraising for extra club money. You can teach rocketry classes to local groups like the boy or girl scouts and offer businesses to feature their logos on your rocket. Partake in city events that allow you to showcase hobbies!

Help from funding

Ask local rocketry experts to come speak at club meetings. You'd be surprised at how far some of them are willing to travel! Advertise these events through department offices who will often email every student in the department about it.

Figure 4: First handmade fiberglass tubes.

Figure 5: Continued Growth – IREC team (Pictured left to right are Damian Loya, Zack Darpinian, Daniel Franken, Austin Jantz, Warren White, and Fred Heinecke).

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More ways to network

Network with other clubs. HAM radio? It's used extensively in rocketry. That unmanned aircraft team you thought about? They love anything that flies! The Baja SAE competition team? They donated every roll of extra fiberglass mat we needed for a competition rocket. Again, make sure to network!

Well worth the effort

As you've probably guessed reading through this, the road is tough to build the proper foundation for a rocketry club at university. However, the sheer joy of new members seeing what we did, the enthusiasm of university professors, and the common goal of a high power competition rocket all made it more than worth it.

-David Heitmeyer
-Founding President
-Wildcat Rocketry
-Kansas State University

Figure 6: Club Day with IREC Rocket.

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