NCTC Advising FAQ for Math, Physics, Engineering, Construction Science, Architecture and Computer Science

Math and Science Related Pathways

1. What degrees and pathways are offered?

While we offer four different pathways, which one you will follow and how closely you stick to it is dependent on the requirements for your intended transfer program. This is affected not only by specific major, but on transfer institution. Here are the links for those four pathways:

- **Math**: http://www.nctc.edu/catalog/degree-transfer-pathways/association-of-arts/math.pdf
- **Physics/Engineering (and Architecture)**: http://www.nctc.edu/catalog/degree-transfer-pathways/associate-of-science/physics.pdf
- **Computer Science**: http://www.nctc.edu/catalog/degree-transfer-pathways/association-of-arts/computer-science.pdf
- **Construction Science/Technology**: http://www.nctc.edu/catalog/degree-transfer-pathways/association-of-arts/construction-management-technology.pdf

2. Is this degree transferable?

Yes! All of these pathways are intended for transferring to a traditional 4-year degree at a university. However, they may need to be tailored for the specific program you are wanting to go into to-working with both your advisor at NCTC and a transfer advisor at your transfer institution is important to make sure the process is as seamless as possible.

3. Does this degree or program require pre-requisites?

Every one of these pathways have Math pre-requisites as listed below, and until you have met the Math pre-requisites, you will be placed under General Studies as a major.
Math Pathway: College Algebra and either Pre-Calculus or Trigonometry
Physics/Engineering Pathway: College Algebra and either Pre-Calculus or Trigonometry
Computer Science Pathway: College Algebra, Pre-Calculus or Trigonometry, Calculus I

4. Do I have to take my classes in sequence?

Yes! Many classes in the STEM (Science, Technology, Engineering and Math) fields have foundational skills you need to learn before moving into more advanced courses. For example, you have to take BIOL1406 before BIOL1407 or CHEM1411 before CHEM1412. The same applies to Math and Computer Science classes. This is why it is very important to create an academic plan and stick to the course sequencing, otherwise you could end up spreading your classes out over additional semesters and delay your graduation or transfer date.

5. **What is the difference between AA and AS, and why are some of these pathways under the Associates of Arts (AA) instead of Associates of Science (AS)? Does it affect transferability?**

   The difference between an AA and AS depends on the Math credits required and how many lab sciences (for science majors) you take. For the sake of these pathways, the science classes are the main deciding factor, as the AS requires that you take 4 lab science classes and many times this many sciences are not needed at your transfer institution. Therefore, except for the Engineering/Physics pathway, these plans all fall under an AA. This does NOT affect transferability! You just need to make sure you are taking the individual classes required for the program at your intended transfer institution.

6. **Engineering Pathway or Engineering Technology?**

   The AS (Associate of Science) Engineering pathway is for students who are planning on transferring to a university in either Engineering, Engineering Technology, or Architecture.

   Engineering Technology AAS (Associate of Applied Science) and Certificate programs are for students wanting to pursue a career in drafting. This major *may* be applicable for students who are interested in Architecture or Engineering, but all depends on the student's career and transfer goals.

7. **Computer Science, Business Computer Information Technology, or one of our AAS programs in Information Technology?**

   This decision is dependent on the Career field you are wanting to go into, and in some cases, there is more than one way to get there.

   Any one of AAS programs is an excellent way to get to started with a career in those IT fields, with the opportunity to transfer into a Bachelor's of Applied Arts and Sciences (BAAS) program at a university. With these programs, you have the option of going for an emphasis in either Business or a more Computer Science based Information Technology programs. For more information and a list of participating institutions, please review the AAS to BAAS Guided Pathways: http://ntxccc.org/pathways?field_aas_school_tid%5B%5D=7.

   However, if you are interested in Computer Science, Computer Engineering, and Software Engineering students you will most likely follow our Computer Science pathway, versus completing one of our AAS programs. Computer Science has an emphasis on advanced programming, using languages like C++, C#, Java, and Python. This pathway will also help you focus on any advanced math and science pre-requisites required by these majors, most often including Calculus I and II and Linear Algebra, along with Engineering Physics I and II.

Business Computer Information Systems is another degree option for those that want a program that focuses specifically on managing computer systems and data in the corporate world, giving you both a background in Business and IT. For this degree option you would follow our Business Pathway at NCTC and then complete your IT training at the university level.

8. Are there additional courses I need to take or can take beyond what is on the degree plan?

Yes! First, you will have to take Math pre-requisites, which will add to the number of credit hours you complete at NCTC. Only those who have received credit for those Math classes through either AP, CLEP, or IBD testing (with adequate scores) will be exempt from those pre-requisites. Here is a chart listing exam scores needed to receive credits, and what credits you could/would receive: https://www.nctc.edu/catalog/admissions-information/advanced-placement-examination/credit-by-exam-chart.html.

Next, for most of these pathways, there are additional courses you are able to take that are not explicitly listed on the degree path. However, this does depend on your transfer institution, the courses required by their degree plan and their policy on transfer credits.

9. Can I transfer before completing my degree at NCTC?

You are able to transfer at any point in time, pending the policies of your transfer institution. In some cases, it is even advisable to transfer sooner rather than later-Architecture is a great example. While it is good to get a head start on the Math and science requirements for Architecture, it is also possible that you may be enrolled concurrently which means you are attending both NCTC and your transfer university at the same time! Talk to your advisor for more information about this option.

10. How long will it take me to complete one of these majors/programs?

The listed suggested pathway is for 2 years. However, this depends on whether or not you need to take pre-requisites or extra courses, how many credit hours you take per year (or semester), and sequencing of courses (as some courses are only offered during certain semesters). While they can certainly be completed within 2 years, it is not uncommon for these degree pathways to take up to 3 years, even as a full-time student. The goal is to make sure you are taking your classes in a way that you can be successful, and for many students that means not rushing through Math and science requirements.

11. How can I complete one of these majors/programs? Can it be done online and/or are they campus specific?

Generally, none of these pathways can be done completely online. However, most of your general education credits can be taken online, limiting the amount of time spent on campus if needed.

While there is some flexibility on where and how you take your classes, there will be some required courses that are only offered at the Corinth campus. Those courses include advanced Math classes like Calculus II and above, Physics courses, and on-campus Computer Science classes. So, please be aware of that.

12. Can I use my Financial Aid for these majors?

Absolutely! As long as you are staying on plan and taking classes within your major. You will work with your advisor to create a plan that works best for you. For certain Engineering majors, it is possible that you will be on a science pathway to focus on foundational courses first.

13. Will the credits I have from another college be applied to this degree, and how?

This will vary, pending on where and when you took them, and whether or not the courses you took apply to your degree pathway. For example, an Acting class may transfer in as credit, but may not count towards your Computer Science degree requirements. To have your transcripts evaluated and any applicable credits transferred in, you will need to complete a Transcript Evaluation Request. Transfer credits are NOT automatically evaluated and applied. While you are waiting on your transcripts to be evaluated, you are able to work with your advisor to verify pre-requisites and to pick classes you don't possibly have credit for already.

14. Which universities offer my major and how do I view their requirements?

Here is a list of universities and links to their transfer guides. Please note this is not an exhaustive list, there are many, many more schools that may have your program/major.

- University of North Texas (UNT): Transfer Guides | Office of the Registrar
- Texas Women's University (TWU): https://twu.edu/transfer-resources/texas-community-college-transfer-guides/
- University of Texas – Arlington (UTA): https://www.uta.edu/admissions/apply/transfer/transfer-guides/2020-2021
- University of Texas – Dallas (UTD): https://www.utdallas.edu/enroll/transfer/plans/
- Texas A&M University (TAMU): https://admissions.tamu.edu/transfer/majors
- University of Texas – Austin (UT): https://admissions.utexas.edu/apply/transfer-resources/tccn-transfer-guides
- University of Houston (UH): https://www.uh.edu/undergraduate-admissions/apply/transfer/transfer-equivalency-guides/index

15. Which NCTC advisor or faculty can I contact for more information?

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10. Where can I access the recording of the Math, Physics, Engineering, Construction Science, Architecture and Computer Science Q&A session with NCTC advisors and faculty?

Just click the image below or visit NCTC Student Life on YouTube to locate any number of great videos!