TIMELINE FOR PROFESSIONAL HEALTH CARE PROGRAMS

OR,

How to figure out what you need to do and when you need to do it!
So, you want to be a doctor, pharmacist, vet, dentist, physician assistant, physical therapist??

• **What is a health professional?**
  • According to Wikipedia, a health professional “is one who provides preventive, curative, promotional or rehabilitative health care services in a systematic way to individuals, families or communities.”
  • [https://www.youtube.com/watch?v=IhLgtTMTklQ](https://www.youtube.com/watch?v=IhLgtTMTklQ)

• **How do you get started?**
  • **Assess**
    • Figure out your “why” (your own motivation)
    • Do you have a good “head?” Do you have the intellectual capacity to do the work? Are you a good problem solver? Do you love to learn? Science?
    • Do you have a good “heart?” Do you have empathy? Do you know what it’s like to be a patient? Are you committed to service towards others?
    • Are you prepared to spend the time? Are you committed for the long haul?
    • Are your strengths and skills a good match?
    • Can you plan financially for the long-term investment?
How do you get started?

- **Explore**
  - Volunteer, shadow, interview, observe, work, view career videos
  - Take advantage of visits to campus from health care professionals
  - Be active in pre-health club to become more aware of options
  - Research health professional websites to learn more about the field
    - [www.osteopathic.org](http://www.osteopathic.org) American Osteopathic Association
    - [www.ada.org](http://www.ada.org) American Dental Association
    - [www.aamc.org](http://www.aamc.org) Association of American Medical Colleges
    - [www.aapa.org](http://www.aapa.org) American Academy of Physician Assistants
    - [www.apta.org](http://www.apta.org) American Physical Therapy Association
    - [www.aacp.org](http://www.aacp.org) American Association of Colleges of Pharmacy
    - [www.avma.org](http://www.avma.org) American Veterinary Medical Association
So, you want to be a doctor, pharmacist, vet, dentist, physician assistant, physical therapist??

- **How do you decide which one?**
  - What inspires you to go into health care?
  - What answers do you expect to provide?
  - What kind of problems do you like to solve?
  - If you could do whatever you wanted – all day long, every day – what would that one thing be?
  - Do you have a realistic idea of what it means to be that health care professional?
  - Do you have a personal experience that leads you in a particular direction? Figure out your own motivation for wanting to enter this field.
  - How much do you want to work with people? Sick, needy, unpleasant?
  - Do you get grossed out by bodily functions, blood, vomit, death?
  - How much debt are you willing to incur?
  - [https://www.youtube.com/watch?v=FsPCnd15d4](https://www.youtube.com/watch?v=FsPCnd15d4)
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- **How to prepare**
  - **Determine if you are making an informed choice**
    - Learn about requirements for different programs
    - Understand the difference between major requirements, pre-req requirements, test requirements
  - **Determine your own timeline**
    - Is completing everything necessary realistic prior to application?
      - Make sure you understand everything that is considered in application
    - Research application dates and deadlines
    - Do you have to work 20+ hours per week?
    - Are you an athlete?
    - Will you become a better applicant if you take some time to complete your degree, pre-reqs & extra-curricular? What is your hurry?
      - CU’s average age numbers: 25 - MD; 27 - PA; 27 - PT; 25 – DDS; 20-60 – PharmD; 25 – CSU’s DVM
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**How to prepare continued**
- **Create a plan of action**
  - Manage your academics – remember that GPA is 1st qualifying criterion
    - Problem solve if you struggle (1st opportunity to practice that all important quality)
    - Don’t hesitate to stretch out degree if necessary
    - Recover if you have a poor semester – figure out how to improve
    - Use GPA calculator, [http://gpacalculator.net/college-gpa-calculator/](http://gpacalculator.net/college-gpa-calculator/)
  - Become involved in extra-curricular activities – leadership is important
  - Get involved in health care in some way – volunteer or work
  - Show your desire to help people in a concrete way
  - Get to know your faculty – search for research opportunities to develop critical thinking & problem solving skills
  - Work on soft skills – communication, team work, time management
  - Read about health care in your off time so you are current on trends
  - Challenge yourself so you can grow, reflect and mature
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- **How to prepare continued**
  - **Create a plan of action**
    - Make sure you understand all of the classes you need and the time you need them – can vary depending on your timeline and your chosen profession
      - Medical school, dental school, pharmacy school require specific courses completed sooner due to specific admissions tests
        - Specific science courses are necessary for each one as well as a quantitative analysis course
        - Medical School applications – AMCAS opens in May, submission in early June, early admission in early August ([www.aamc.org](http://www.aamc.org)).
        - Dental School applications – ADEA AADSAS opens in June ([www.adea.org](http://www.adea.org)). Check for early selection programs
        - Pharmacy School applications – PharmCAS opens in July, early admission in September ([www.pharmcas.org](http://www.pharmcas.org)).
    - Be aware of time to have everything verified – can take 4 – 5 weeks
    - Check for supplemental requirements – based on programs
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- **How to prepare continued**
  - **Create a plan of action**
    - Make sure you understand all of the classes you need and the time you need them – can vary depending on your timeline and your chosen profession
    - Physical Therapy, Physician Assistant, Veterinary Medicine all require the GRE – no science category on GRE – only Verbal, Quantitative & Written
      - [www.gre.org](http://www.gre.org)
      - Veterinary Medicine applications open in June ([www.aavmc.org](http://www.aavmc.org)). Check for early selection programs
      - Physical Therapy applications open in July ([www.ptcas.org](http://www.ptcas.org)). Early admission is August 15th
      - Physician Assistant applications open in April ([https://portal.caspaonline.org](https://portal.caspaonline.org)). Reviews begin in June
    - Be aware of time to have everything verified – can take 4 – 5 weeks
    - Check for supplemental requirements – based on programs
    - Know the specifics for each program
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- **Understand the competitive nature of professional programs**
  - Fall 2013 CU Medical School = 4248 applicants, 558 interviews, 160 spots, 26.5:1 ratio
    - CO applicants = 535 w/284 interviews
    - Non resident applicants = 3713 w/274 interviews
  - Fall 2011 CU Dental School = 1248 applicants, 52 spots, 24:1 ratio
  - CU School of Pharmacy = 1120 applicants, 160 spots, 7:1 ratio
  - Fall 2013 CU Physical Therapy Program = 554 applicants, 154 interviewed, 66 spots, 8.4:1 ratio
  - Fall 2014 CU Physician Assistant Program = 1034 applicants, 148 interviewed, 44 spots, 23.5:1 ratio
  - Fall 2014 CSU Doctor of Veterinary Medicine = 1550 applicants, 138 spots, 11.2:1 ratio
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- Major Requirements
- Pre-reqs for Schools
- Course Recommendations for Test

Diagram:
- Major Requirements
- Pre-reqs for Schools
- Course Recommendations for Test
Pre-reqs - Medicine, Pharmacy & Dentistry

**Pre-reqs for medicine, pharmacy & dentistry** (CU programs)
- General Biology I & II (with labs) (7 year limit for pharmacy)
- General Chemistry I & II (with labs) (7 year limit for pharmacy)
- Organic Chemistry I & II (with labs) (7 year limit for pharmacy)
- Physics I & II (with labs) – algebra based (pharmacy needs only 1)
- Math – College Algebra & above (pharmacy needs calculus)
- English composition I & II (dentistry needs only 1)
- **Not all schools accept AP/IB credit – check each one**

**Additional course requirements**
- Microbiology & A & P I & II (required for pharmacy – 7 year limit)
- Microeconomics, public speaking, humanities/social sciences (pharmacy)
- Bacteriology/Mycology (dentistry)
- Biochemistry (dentistry)
Pre-reqs - Medicine, Pharmacy & Dentistry

- **Strongly recommended courses**
  - Cell biology, genetics, biochemistry, anatomy & physiology, immunology, social sciences, business courses, communication, computer science, biostatistics, ethics

- **MCAT now requires biochemistry, psychology, sociology and quantitative analysis**
  - Work with pre-health advisor/academic advisor to ensure you have all of the necessary courses prior to MCAT
  - Personal timeline becomes extremely important for course selection
  - Would need 12 courses minimum (51 credit hours) completed in 5 semesters in order to take MCAT in spring of junior year
Pre-reqs - Physical Therapy

• **Pre-reqs for Physical Therapy** (CU) – doesn’t include department pre-reqs
  • General Chemistry I & II (with labs) (5 year limit)
  • Physics I & II (with labs) (5 year limit)
  • Upper Division Human Anatomy & Human Physiology (5 year limit with Physiology being completed no later than December of application cycle)
  • English composition I
  • Abnormal & Developmental Psychology
  • Calculus
  • Statistics
  • 3 hours upper division science (biochemistry or cell biology)

• **Recommended courses**
  • Organic Chemistry
  • Exercise Physiology

• **No more than 6 credit hours of science pre-reqs may be outstanding in order to be a viable candidate**
Pre-reqs - Physician Assistant

- **Pre-reqs for Physician Assistant (CU)** – doesn’t include department pre-reqs

- **To be completed prior to application:**
  - 14 credit hours of biological sciences
    - General Biology I & II (with labs)
    - 6 credit hours of Upper division completed within 5 years of application deadline (no Exercise Science or Kinesiology)
    - Anatomy & Physiology (can be lower or upper division but upper division is recommended – can count as upper division requirement if UD courses)
    - General Chemistry I & II (with labs)
  - If unable to complete UD A & P prior to application but have completed 14 credit hours of biology including 6 hours of UD coursework, you can complete A & P after application

- **To be completed prior to matriculation:**
  - Upper Division Genetics
  - 6 credit hours of psychology (gen psych, abnormal or developmental)
  - Statistics (may be from any department)

- **Recommended courses:**
  - Biochemistry, cell biology, immunology and microbiology
Pre-reqs - Veterinary Medicine

• **Pre-reqs for Veterinary Medicine** (CSU) (minimum 60 hours)
  • General Biology I & II (with labs)
  • General Chemistry I & II (with labs)
  • Physics I (with lab)
  • Cell Biology
  • Genetics (10 year limit)
  • Biochemistry (10 year limit)
  • Statistics
  • English composition I
  • 12 credit hours of humanities/social sciences

• **Recommended courses**
  • Anatomy & physiology, microbiology, nutrition, developmental biology, computer science courses
Additional Requirements

• **Additional requirements**
  • Specific volunteer/work hours – varies by program
    • Vet program = 1000-2000 hours vet experience & 1000-2000 hours animal experience
    • PA programs = can be up to 1000-4000 hours, some required paid experience & definitions of type of experience can vary, if required by PA Program
    • PT programs = 0-100 hours, usually divided into specific areas
  • Leadership qualities
  • Knowledge of health care field – trends, ethical issues, roles, etc.
  • Commitment to service/passion for patient care
  • Research experience
  • Teamwork experience
  • Self awareness and examples of strong personal characteristics
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• **What to do if you don’t get in or choose to wait?**
  - Be intentional – create a stronger application – look for an area where you need to improve and pursue that
  - Consider the following:
    - Employment
    - Community Service
    - Graduate Education
    - Research
    - Specific enrichment programs in health care
  - Make your Plan B a way to achieve your original Plan A
  - Be sure to talk with your references – get them to write the letter now but save it for submission later
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**Other health care professions**
- Respiratory Therapist
- Diagnostic Medical Sonographer
- Anesthesiologist Assistant
- Audiologist
- Optometrist
- Genetics Counselor
- Public Health Educator
- Researcher
- Built Environment Specialist
- Registered Dietician
- Food Safety Specialist

**Explorehealthcareers.org**
- Occupational Therapist
- Clinical Laboratory Scientist
- Athletic Trainer
- Podiatrist
- Cytotechnologist
- Biostatistician
- Animal Behaviorist
- Registered Nurse
- Exercise Physiologist
- Medical Dosimetrist
- Blood Bank Technology Specialist