Goal 1: Prompt you to identify and think about all your career pathway decision points

To invest your scarce time and money the best, you need to:
• Understand how the world you’re heading toward works
• Identify the forks in your path
• Find the information you need to make good decisions
• Avoid narrow or mistaken views (remove blinders)

Know where, when and what your choices are
• Just passively going along with the flow is dangerous to success

Many choices aren’t this obvious!

When you come to a fork in the road, take it! Yogi Berra

https://quoteinvestigator.com/2013/07/25/fork-road/

Many choices aren’t this obvious!

Goal 2: Prompt hard work on non-curricular stuff!

• You are in a competitive pull
  – Success requires exceeding the minimum requirements!
• Know how to maximize your value to employers and clients
  – This is not just passively getting a degree anymore!
• Develop your financial literacy to the point of understanding:
  – time value of money, rule of 72
  – loan amortization
  – investing for retirement
  – living costs (cars, rent, food, . . .)

Get your Blinders off!

What does it take to get into veterinary school?

http://www.vetmed.wsu.edu/
Find out the real scoop here: “Future Students”

Prerequisites, good grades in hard courses and more!

Admissions
• Academic Criteria
• Non-cognitive Criteria
• Class Statistics

Apply Now
Contact Us

Find and read all this stuff real soon!

How do you get admitted? The ‘Brass Tacks’

Show solid evidence of leadership and of service
  – As a professional, veterinarians are expected to be community leaders
Show “headspace”- high ability, good attitude, strong ethics
  – Do well in hard capstone courses – Proves you can do veterinary coursework
  – Transcripts evaluated for course difficulty and course load!
  – Rigor of institution and of major is judged
Show evidence of resilience and of persistence
  – Strong finish is most important (top grades in tough upper division classes)
Be well rounded and communicate well
  – Significant sales or service employment experience preferred
  – Be prepared for behavioral interview questions
  – Narrow, poorly communicating 4.0 students are regularly rejected

Warning: Some of this is my opinion; official WSU CVM information is @ http://dvm.vetmed.wsu.edu/admissions/
Meet the required (but limited) prerequisites

Physical & Biological Science Requirements
- Biology with lab 8
- Inorganic chemistry with lab 8
- Organic chemistry with lab 4
- Genetics 3
- Biochemistry 3
- Physics with lab 4
- Statistics (methods) 3
- Algebra, Pre-calculus or higher 3

General Education Requirements
- English composition / communication 6
- Arts & humanities / social science / history 21

Total SEMESTER credit hours 64

These are deliberately limited so that students in diverse undergraduate programs can apply

Word to the Wise: Just meeting prerequisites does not make you a strong applicant!

So how good is enough?

Selected statistics from WSU class admitted in 2018

Of 1,434 applicants, 133 admitted (9%)

<table>
<thead>
<tr>
<th>Cumulative GPA</th>
<th>Science GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>3.67</td>
</tr>
<tr>
<td>Range</td>
<td>2.69 - 4.00</td>
</tr>
<tr>
<td>Above 3.2</td>
<td>95%</td>
</tr>
</tbody>
</table>

On-line at http://dvm.vetmed.wsu.edu/admissions/class-statistics

VMCAS Overall – 7,507 applicants, 4,151 (55%) admitted

http://www.aavmc.org/about-aavmc/public-data

Word to the Wise: Work toward a good ‘Plan B’; there is ~45% chance you will be doing it!

Other WSU Class of 2022 statistics

<table>
<thead>
<tr>
<th>Average</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRE %</td>
<td>61%</td>
</tr>
<tr>
<td>Verbal</td>
<td>65%</td>
</tr>
<tr>
<td>Quantitative</td>
<td>55%</td>
</tr>
<tr>
<td>Analytical Writing</td>
<td>63%</td>
</tr>
<tr>
<td>Years of College</td>
<td>3.9</td>
</tr>
<tr>
<td>Age</td>
<td>24</td>
</tr>
</tbody>
</table>

What classes are in the DVM curriculum?

- Vet Microscopic Anatomy
- Immunology
- Vet Anatomy I & 2
- Theriogenology
- Vet Cell Physiology
- Small Animal Surgery
- Physiology
- Large Animal Surgery

ADVICE: Invest your scarce elective time in ‘value-added’ coursework that veterinary schools don’t do well (e.g., business, animal nutrition, reproductive physiology) rather than in those they do well (e.g., anatomy, microbiology)!

- Clinical Pathology
- Parasitology
- Vet Toxicology
- Public Health
- Epidemiology

153 Credit Hours (~19 / semester)

http://dvm.vetmed.wsu.edu/general/curriculum/

What does a DVM degree cost?

4 years, usually beyond undergraduate degree

Ave. annual in-state costs:
- $25,530 tuition ($31k median)
- $ 3,298 books and fees
- $ 12,421 room & board
- $ 3,875 travel & misc

~$ 45,084 per year
~$180,336 Total

$111,000 are fees

http://dvm.vetmed.wsu.edu/finances/cost-of-attendance

Follow your dreams -- but know where your dreams are leading you!

(Jeff Haden 4/26/11)
DVM Student Debt: The Elephant in the Room!

2017 AAVMC New Graduate Debt:
- $163K AAVMC median debt
- 7% owed > $300K
- 20% graduate debt free
2017 WSU New Grad with Debt:
- $132K WSU mean total debt
- $124K DVM debt
- $12K undergrad

20% graduate debt free

How much does the average DVM make?

Range depends on:
- Employee vs. Owner
- Geographic area
- Individual competency
- Species focus

All DVM’s

$43.47 / hr
$90,420 / yr
(Median)
2,080 hrs / yr

US Bureau of Labor Statistics
25-1131

Use BLS Occupational Employment Statistics for considering Plan B careers

What are new DVM’s paid?

Average 2018 starting salaries, high to low, rounded

<table>
<thead>
<tr>
<th>Employment Type</th>
<th>% of New Graduates</th>
<th>Average Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Animal excl</td>
<td>2%</td>
<td>$78,000 1.7</td>
</tr>
<tr>
<td>Companion excl</td>
<td>30%</td>
<td>$77,000</td>
</tr>
<tr>
<td>Uniformed Services</td>
<td>2%</td>
<td>$77,000</td>
</tr>
<tr>
<td>Companion pred</td>
<td>7%</td>
<td>$76,000</td>
</tr>
<tr>
<td>Food Animal pred</td>
<td>3%</td>
<td>$74,000</td>
</tr>
<tr>
<td>Mixed</td>
<td>9%</td>
<td>$73,000</td>
</tr>
<tr>
<td>Equine</td>
<td>2%</td>
<td>$58,000 2.3</td>
</tr>
<tr>
<td>Advanced Study</td>
<td>44%</td>
<td>$42,000 3.1</td>
</tr>
</tbody>
</table>

Why is student debt such a big deal?

Applying some ‘thumb rules’:
- Employers net ~75% of their gross salary
  - $77,000 salary => $57,750 net take home
- If debt = first year salary (1:1), at 6.8% interest, 10 year payback, 3% annual salary increase, loan payments are:
  - 13% of salary
  - 17% of net take home

Why don’t employers pay more?
- First, employees cost employer ~25% more than their gross salary (benefit contributions, taxes)
  - $77,000 salary => $96,250 employer cost

The debt to salary ratio makes understanding personal financial literacy critical

If you don’t take a class in it, read inexpensive paperbacks:

Wells Fargo Student Loan Debt Calculator

The debt to salary ratio makes understanding personal financial literacy critical

For estimating your future living expenses:
- Google ‘MIT Living Wage Calculator’
  http://livingwage.mit.edu/
- Andrew Hallam
  Basic Question: Can you service your debt and still have a life?

Understand: JD Roth’s 18 Favorite Financial Rules of Thumb
What do you have to charge to earn a $77,000 salary (Or why do vets charge so much)

“Fee setting: A look at margins” (ML Heinke, DVM Newsmagazine 2/1/10)

- 8 hrs / d x 5 d / wk x 50 wks / yr = 2,000 hrs / yr + 2 wk vacation
- Small animal practice revenue needed per DVM: 4 x salary to cover salary plus overhead (overhead = 75% of gross practice income)
  - Need to generate $308k gross revenue for $77k annual salary
  - Since ~50% of time is billable => $308 per hr professional fee (not including lab fees, pharmaceuticals, etc.)
- Ambulatory-only LA practice gross = 2 x salary to cover salary plus overhead, no clinic (overhead = 50% of gross practice income)
  - 2 x salary = $144,000, if 50% time is billable => $144 per hr professional fee

• 8 hr / d x 5 d / wk x 50 wks / yr = 2,000 hr / yr + 2 wk vacation
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  - 2 x salary = $144,000, if 50% time is billable => $144 per hr professional fee

Professional Billing to Salary Ratio

<table>
<thead>
<tr>
<th>Profession</th>
<th>Billing to Salary Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attorney</td>
<td>5 to 7</td>
</tr>
<tr>
<td>Accountant</td>
<td>4 to 5</td>
</tr>
<tr>
<td>Business Consultant</td>
<td>4 to 5</td>
</tr>
<tr>
<td>Clinic-based veterinarian</td>
<td>4 to 5</td>
</tr>
<tr>
<td>Industrial Designer</td>
<td>3.5 to 4</td>
</tr>
<tr>
<td>Consulting Engineer</td>
<td>3 to 10</td>
</tr>
<tr>
<td>Architect</td>
<td>2.5 to 3.5</td>
</tr>
<tr>
<td>Interior Designer</td>
<td>2.5 to 3.5</td>
</tr>
<tr>
<td>Ambulatory-only veterinarian</td>
<td>2</td>
</tr>
</tbody>
</table>


Practice owners earn more net income than employed practitioners

<table>
<thead>
<tr>
<th>Practice Type</th>
<th>Owner Net Income</th>
<th>Associate Net Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Animal excl</td>
<td>$127,000</td>
<td>$72,000</td>
</tr>
<tr>
<td>Food Animal pred</td>
<td>$100,000</td>
<td>$71,000</td>
</tr>
<tr>
<td>Mixed</td>
<td>$104,000</td>
<td>$75,000</td>
</tr>
<tr>
<td>Companion pred</td>
<td>$105,000</td>
<td>$77,000</td>
</tr>
<tr>
<td>Companion excl</td>
<td>$133,000</td>
<td>$87,000</td>
</tr>
<tr>
<td>Equine</td>
<td>$120,000</td>
<td>$71,000</td>
</tr>
<tr>
<td>50th percentile overall</td>
<td>$120,000 (43%)</td>
<td>$84,000</td>
</tr>
</tbody>
</table>

Table 15, AVMA Report on Veterinary Compensation, 2015

Public or corporate employment is another option

<table>
<thead>
<tr>
<th>Employer Type</th>
<th>2013 Mean Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry</td>
<td>$183,000</td>
</tr>
<tr>
<td>Other (?)</td>
<td>$135,000</td>
</tr>
<tr>
<td>Federal Government</td>
<td>$120,000</td>
</tr>
<tr>
<td>Academic</td>
<td>$113,000</td>
</tr>
<tr>
<td>Military</td>
<td>$109,000</td>
</tr>
<tr>
<td>State Government</td>
<td>$87,000</td>
</tr>
<tr>
<td>Overall</td>
<td>$129,000</td>
</tr>
</tbody>
</table>

Table 10 AVMA Report on Veterinary Compensation, 2015

Can you go back home to practice?

Depends on:
- Species interest
- Geographic density of those animals

Use the USDA Census of Agriculture to find county livestock numbers

While “mixed practices” are common, “mixed practitioners” are not

<table>
<thead>
<tr>
<th>State</th>
<th>Practitioner Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT</td>
<td>Companion Exclusive (&gt;80% small animal – cats, dogs, bird)</td>
</tr>
<tr>
<td>WA</td>
<td>Companion Predominate (&gt;50%, &lt;90% small animal)</td>
</tr>
<tr>
<td>39%</td>
<td>10%</td>
</tr>
<tr>
<td>72%</td>
<td>17%</td>
</tr>
<tr>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>398</td>
<td>1,278</td>
</tr>
<tr>
<td>Total AVMA member private practitioners</td>
<td></td>
</tr>
</tbody>
</table>
Even ‘mixed’ practitioners are really small animal and ‘food animal’ are really dairy

<table>
<thead>
<tr>
<th>Practice Type</th>
<th>Species mix by median time spent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Animal exclusive</td>
<td>95% dairy, 5% beef</td>
</tr>
<tr>
<td>Food Animal predominate</td>
<td>62% dairy, 24% beef, 5% horses, 4% dogs, 2% cats</td>
</tr>
<tr>
<td>Mixed</td>
<td>29% dogs, 17% cats, 15% bovine, 12% horses</td>
</tr>
<tr>
<td>Companion predominate</td>
<td>52% dogs, 35% cats, 5% horses</td>
</tr>
<tr>
<td>Companion exclusive</td>
<td>60% dogs, 37% cats, 2% other, 1% birds</td>
</tr>
<tr>
<td>Equine</td>
<td>100% equine</td>
</tr>
</tbody>
</table>

AVMA Report on Veterinary Compensation, 2011

Dairy work back home?

Clarity your family value priorities and understand the practice economics for your species interest early in your decision process!

1 dot = 2,000 calved cows

~9 million head of dairy cows

2012 Ag Census Publications

Horse work? Certainly not equine exclusive

Unless you are independently wealthy, avoid mistaking an avocation for a vocation!

1 dot = 500 head

~4 million head of horses

http://www.agcensus.usda.gov/Publications/2012/

What’s unique about Food Supply Veterinary Medicine (FSV) compared to small animal practice?

Small Animal Practice

Dairy Practice

Besides small animal practice being indoors out of the weather, cleaner, smaller critters, . . . .

Food Supply Vet Med is focused on prevention

Prevention economics beat cure economics most of the time

“End it now!”

http://www.robertmmiller.com/

Management and nutrition are at the root of most herd disease problems

• To understand how to prevent these problems, you must understand the specific management system
• Even true for mixed practitioners dealing with people “returning to the land”

Bad Management overwhelms the Best Vaccine every time!
Increasing herd size changes what the vet does

- Livestock are produced on fewer but larger farms
  - 6% of livestock operations produce 71% of livestock sales
- Less of the “doer” and more of a trainer of the “doer,” who is a farm employee
  - Involved in employee selection, training and monitoring
  - Traditional feedlot veterinarian role
- Develop farm-specific standardized operating protocols (SOP) that are executed by employees
  - More consistent practices in critical areas
  - Better preventive practices reduce treatment needs
- Fewer veterinarians are covering more cows
  - Midwest – small dairy herds: 1 vet to ~6,000 cows
  - New Mexico – large dairy herds: 1 vet to 20,000+ cows

To become a FSV, major in animal science, production track!

- Learn the basic food supply system components well
  - Soils, crops, animals, environment, farm input and food supply chains
- Take all ruminant nutrition that you can
  - Feed is ~50% of production costs!
- Take all reproductive physiology that you can
  - % Calf crop is largest profit factor!
- Learn to palpate and to do AI
- Take applied agricultural economics and ag business courses
  - Learn production accounting systems and data analysis
  - Become an Excel maven
  - FSVM is a business-to-business service!
- Learn human resources (employee management)
  - You will teach them to do most of the traditional 'hands-on' care
- Take the capstone farm management courses

Aim at becoming an excellent manager or herdsman!

Why applied animal science / farm management?

- Most disease problems involve nutrition and management
- Important decisions always involve economics and risk
  - Anyone not understanding economics of alternatives is much less useful to producers
- Much allied industry "competition" has this academic background

Veterinary herd production medicine texts contain much animal science and production management

Segue – Buddy, the family dog

- Packed for college
- Flossing

Why settle for average, anyway?

1 in 10 DVM’s
$77.44 / hr
$161,000 / yr
(top 10%)
2,080 hrs

Knowing these is part of your career decision process

Depends on:
- Practice Ownership
- Management
- Specialization
- Industry
- Experience
- Location
- Hustle
- ?

http://www.bls.gov/oes/current/oes291131.htm
### 1 in 10 owners and 1 in 10 associates have these incomes:

<table>
<thead>
<tr>
<th>Practice Type</th>
<th>90% Owner Net Income</th>
<th>90% Associate Net Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Animal excl</td>
<td>$400,000</td>
<td>$105,000</td>
</tr>
<tr>
<td>Food Animal pred</td>
<td>$259,000</td>
<td>$111,000</td>
</tr>
<tr>
<td>Mixed</td>
<td>$240,000</td>
<td>$105,000</td>
</tr>
<tr>
<td>Companion pred</td>
<td>$292,000</td>
<td>$110,000</td>
</tr>
<tr>
<td>Companion excl</td>
<td>$310,000</td>
<td>$150,000</td>
</tr>
<tr>
<td>Equine</td>
<td>$275,000</td>
<td>$150,000</td>
</tr>
<tr>
<td><strong>90th percentile Overall</strong></td>
<td><strong>$300,000</strong></td>
<td><strong>$136,000</strong></td>
</tr>
<tr>
<td><strong>50th percentile comparison</strong></td>
<td><strong>$120,000</strong></td>
<td><strong>$84,000</strong></td>
</tr>
</tbody>
</table>

Table 15, AVMA Report on Veterinary Compensation, 2015

### Obtaining a 90th percentile starting salary eases your debt management problems considerably

<table>
<thead>
<tr>
<th>Employment Type</th>
<th>Median Starting Salary</th>
<th>90th Percentile Increase</th>
<th>Percent Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Animal excl</td>
<td>$71,000</td>
<td>+$16,000</td>
<td>23%</td>
</tr>
<tr>
<td>Companion excl</td>
<td>$68,000</td>
<td>+$17,000</td>
<td>25%</td>
</tr>
<tr>
<td>Companion pred</td>
<td>$66,000</td>
<td>+$21,000</td>
<td>32%</td>
</tr>
<tr>
<td>Food Animal pred</td>
<td>$63,000</td>
<td>+$14,000</td>
<td>22%</td>
</tr>
<tr>
<td>Mixed</td>
<td>$61,000</td>
<td>+$15,000</td>
<td>24%</td>
</tr>
<tr>
<td>Equine</td>
<td>$34,000</td>
<td>+$31,000</td>
<td>91%</td>
</tr>
</tbody>
</table>

### How to be worth a $100K starting salary?

Know your industry completely inside and out:
- Be qualified to work as a manager or herdsman
- Have selected “practice ready” skills and knowledge
- Maximize your learning (time is your most scarce resource)
  - Use university teaching and learning services and websites

Outside of class:
- Spend at least one summer as hired labor on a 2,000+ cow operation
- Join Toastmasters to improve your verbal communication
- Practice leadership skills in student clubs
- Learn Agricultural Spanish
- Regularly scan trade magazines and websites (e.g., Ag Web, Beef Blog, Drover’s, Hoard’s)

Deliberate practice, deliberate practice – 50+ hours to gain minimal competence in a new skill
  

### Develop critical “soft” skills, which are not major parts of most degrees

- Taking Responsibility
- Developing Physical Skills
- Communicating Verbally
- Communicating in Writing
- Working Directly with People
- Influencing People
- Gathering Information
- Using Quantitative Skills
- Asking and Answering the Right Questions
- Solving Problems

Bill Coplin’s 10 Skill Sets:

- [http://billcoplin.org/skills_for_success/](http://billcoplin.org/skills_for_success/)

### Standout by investing in those important literacies that are not part of the professional curriculum

- Communication literacy
- Economic literacy
- Financial literacy
- Information literacy
- Marketing and Salesmanship literacy
- Sell successfully
- Quantitative literacy
- Statistical literacy
- Critical Thinking and Decision Making

20 min / night, 6 nights a week for 6 weeks = 1 credit
(50 min/session x 15 sessions)
Invest 500 hours to become subject expert in ~5 years

### Determine what success means to you and target it

Harness the power of your own intrinsic (internal) motivation by establishing your:
- Autonomy (chart your course)
- Mastery (competence, flow)
- Purpose (service)

Deborah A. Olson, PhD
Listen to Richard St. John: “8 to be great” keys to success

http://www.ted.com/speakers/richard_st_john

The veterinarians doing the best economically are entrepreneurs breaking new ground

- Emphasize:
  - Those services purchased more by good managers than by bad
  - Conventional practice is the opposite!
- Approach an old market a new way:
  - Solve problems preventing service consumption
  - Old services delivered more cheaply
- Create a new market:
  - New value-added service using new technology
- Entrepreneurship
  - Develop new business models
  - Learn marketing; the profession doesn’t market itself well
- Change is constant!

Schumpeter’s free-market “creative destruction” process