Career Options in the Life Sciences

Presented by:
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In collaboration with UCLA’s Neuroscience Department
Jaclyn Robbin & Aftin Whitten
FINDING THE RIGHT FIT: CONNECTING YOUR MAJOR TO A CAREER

It’s not always that simple........
Myths

- Your major is directly related to a career
- Choose a career carefully because you cannot change later
- Begin graduate/professional school immediately
- A career will come to you one day
- There are no jobs ‘out there’
- You need to find your passion before you get started
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicine and Health</td>
<td>Work as physicians, dentists, pharmacists or veterinarians</td>
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<tr>
<td>Drug Manufacture and Design</td>
<td>Develop and produce vaccines and drugs, and design new or improve existing tools for diagnosis and detection of disease</td>
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<tr>
<td>Agriculture and Related Industries</td>
<td>Create genetically engineered crops that are more resistant to frost, drought, spoilage, diseases and pests. Develop diagnostic agents and tools for bioremediation (removal of contaminated material from the environment)</td>
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<tr>
<td>Forensic Science (Crime Lab Science)</td>
<td>Work on criminal investigations through the examination of biological samples</td>
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<tr>
<td>Education</td>
<td>Engage in science education as biology or chemistry teachers, professors, or museum curators</td>
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<tr>
<td>Communication</td>
<td>Science policy, science writing, science reporting, biological and medical illustration</td>
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</tbody>
</table>
Life Science Majors

- Biology
- Cognitive Science
- Computational and Systems Biology
- Ecology, Behavior and Evolution
- Human Biology and Society
- Marine Biology
- Microbiology, Immunology, and Molecular Genetics
- Molecular, Cell, and Developmental Biology
- Neuroscience
- Physiological Science (Integrative Bio & Physiology)
- Psychobiology
- Psychology

Options:
- Research
- Medicine
- Health
- Business
- Education
- Communication
- Government
- And more..
What makes the difference?

- Interests
- Skills
- Aptitudes and abilities
- Personality
- Values
- Motivation for studying science

The difference is you
Assessing Self

Values

Interests

Skills

Personality

Strengths
Career Development Process

- Assessing Self
- Exploring Options
- Setting/Seeking Goals
- Gaining Experience
- Enhancing Career
Nature of Personality Interests – Holland Theory

Assessments can help clarify – a tool

- Career Center workshops
  - “Making Impactful Decisions Through Career Exploration” series
  - Feb 20th and 26th

- Focus 2 – Handshake
Questions to ask yourself

- Why did you choose this major?
- What do you like about your studies?
- What do you dislike about your studies?
- What was your "best job ever?" Why?
- When was a time you felt really energized in your work or studies?
<table>
<thead>
<tr>
<th>Healthcare Practitioners</th>
<th>Nursing/PA</th>
<th>Associated Careers and Therapists</th>
<th>Technologists and Technicians</th>
<th>Rehab Therapists</th>
<th>Healthcare Administration</th>
<th>Insurance Industry</th>
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</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>Licensed nurses</td>
<td>Acupuncturists</td>
<td>Anesthesiologists</td>
<td>Art therapists</td>
<td>Admitting officers</td>
<td>Administration</td>
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<td>Chiropractors</td>
<td>Registered nurses</td>
<td>Audiologists</td>
<td>Blood bank techs</td>
<td>Certified athletic trainers</td>
<td>Accounting and finance</td>
<td>Actuaries</td>
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<td>Dentists</td>
<td>Nurse anesthetists</td>
<td>Dental hygienists</td>
<td>Cardiovascular techs</td>
<td>Dance movement</td>
<td>Coordinators of health wellness</td>
<td>Agents and brokers</td>
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<td>Optometrists</td>
<td>Nurse midwives</td>
<td>Dietitians and nutritionists</td>
<td>Radiology techs</td>
<td>Home health aides</td>
<td>Environmental health and safety</td>
<td>Claims adjusters</td>
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<td>Podiatrists</td>
<td>Nurse practitioners</td>
<td>Genetic counselors</td>
<td>Clinical lab techs</td>
<td>Music therapists</td>
<td>Food service</td>
<td>Loss control specialists</td>
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<td>Veterinarians</td>
<td>Home health aides</td>
<td>Pharmacists</td>
<td>Cytotechnologists</td>
<td>Occupational therapists</td>
<td>Health education</td>
<td>Medical insurance billing and coding reps</td>
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<td>Surgeon assistants</td>
<td>Psychologists</td>
<td>Cardiovascular</td>
<td>Patient reps</td>
<td>Health information technologists</td>
<td>Medical claims reviewers</td>
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<td>Nurse’s aides</td>
<td>Occupational therapists</td>
<td>Nuclear medicine</td>
<td>Physical therapists</td>
<td>Human resources</td>
<td>Public relations</td>
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<td>Physician Asst.</td>
<td>Opticians</td>
<td>Dental assistants</td>
<td>Psychiatric aides</td>
<td>Librarians</td>
<td>Service reps</td>
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<td>Orthotists and prosthetists</td>
<td>Dental lab techs</td>
<td>Recreational therapists</td>
<td>Public relations</td>
<td>Sales and marketing</td>
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<td></td>
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<td>Physical therapists</td>
<td>Diagnostic medical sonographers</td>
<td>Rehabilitation therapists</td>
<td>Nursing home directors</td>
<td>Underwriters</td>
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<td></td>
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<td>Recreational therapists</td>
<td>Diagnostic imaging</td>
<td>Respiratory therapists</td>
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<td>Respiratory therapists</td>
<td>Dietetic techs</td>
<td>Social services aides</td>
<td>Geriatric care managers</td>
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<td>Pediatric occupational therapists</td>
<td>Electroencephalograph</td>
<td>Speech language pathologists</td>
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<td>Biomedical engineers</td>
<td>Emergency techs</td>
<td>Substance abuse counselors</td>
<td>Medical billing, claims,</td>
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<td>Biomedical equipment techs</td>
<td>Paramedics</td>
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<td>patient accounting</td>
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<td>Biomedical photographers</td>
<td>Food techs</td>
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<td>Medical secretaries</td>
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<td>Biomedical writers</td>
<td>Histology techs</td>
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<td>Mental health workers</td>
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<td>Child life specialists</td>
<td>Ophthalmic techs</td>
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<td>Dietary managers</td>
<td>Optometric techs</td>
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<td>Geriatric social workers</td>
<td>Perfusionists</td>
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<td>Phlebotomists</td>
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<td>Pulmonary techs</td>
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<td>Radiation therapy techs</td>
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<td>Surgical techs</td>
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<td>Veterinary assistants</td>
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The UCLA Department of Pathology & Laboratory Medicine offers and/or participates in six Allied Health training programs.

- Clinical Cytogeneticist Scientist Program
- Clinical Immunohematology (Blood Banking) Scientist Program
- Clinical Genetic Molecular Biologist Scientist (CGMBS) Program
- Clinical Laboratory Scientist Program.
- Clinical Microbiologist Scientist Program.
- School of Cytotechnology

https://www.uclahealth.org/pathology/allied-health-training-programs
Clinical laboratory testing plays crucial role in detecting, diagnosing, and treating diseases.

Clinical Laboratory Scientists (CLS) perform and supervise laboratory testing in the clinical laboratory specialty areas of biochemistry, hematology, medical microbiology, immunohematology, immunology, molecular diagnostics, serology and clinical microscopy.

Licensed CLS perform diagnostic testing in hospital clinical laboratories, commercial reference laboratories, or in research and development for biotechnology companies.

After BS, you need 1 year of school and one of internship. Starting salary at UCLA = $80K

Hidden Gems in Healthcare: Clinical Laboratory Scientist: https://www.youtube.com/watch?v=y0G0IO6HO8U&t=1s
Public health professionals are involved in everything from identifying diseases to creating public policy to helping refugees integrate into new communities.

https://ph.ucla.edu/

https://ph.ucla.edu/degree-programs
The program provides undergraduate students the opportunity to explore the field of public health through hands-on training, structured workshops, group events, volunteering opportunities, and leadership and professional development.

https://ph.ucla.edu/action-advocacy-training-programs/ucla-public-health-scholars-training-program
Specialties Within the Public Health Field

- **Biostatistics and Informatics**
  - Biostatistician
  - Medical and Health Services Manager
  - Health Informatics Specialist

- **Community Health**
  - Health Care Administrator
  - Health Educator
  - Community Health Worker

- **Epidemiology**
  - Epidemiologist
  - Field Investigator
  - Research Analyst

- **Environmental Health**
  - Environmental Scientist
  - Quality Investigator
  - Environmental Engineer

- **Global Health**
  - Refugee Coordinator
  - HIV/AIDS Educator
  - Project Manager

- **Health Policy and Management**
  - Health Services Manager
  - Health Department Administrator
  - Government Policy Analyst
Specialties Within the Public Health Field

- Health Promotion and Communication
  - Health Education Specialist
  - Health Promotion Coordinator
  - Public Relations Manager

- Maternal and Child Health
  - Breastfeeding Support Coordinator
  - Nurse Midwife
  - WIC Nutrition Specialist

- Minority Health and Health Disparities
  - Public Health Nurse
  - Minority Health Office Administrator
  - Minority Health Research Analyst

- Social and Behavioral Health
  - Social Worker
  - Psychologist
  - Psychiatric Nurse
Career Opportunities in Biotechnology

*Careers in Biotechnology: [https://www.biotech-careers.org/careers](https://www.biotech-careers.org/careers)*
The areas of Biotech and Drug Development

- Pharmaceuticals
- Biotechnology
- Biotools, Reagents & Services
- Medical Devices
- Biofuels
- Healthcare
Example of available positions in Biotech Industry

- Research scientists (BS, MS accepted)
- Preclinical development experts
- Clinical trials managers
- Statistical analysts
- Clinical trials scientists
- Medical communications

- Medical writing
- Regulatory affairs
- Manufacturing
- Quality assurance
- Intellectual property management
- Sales
- Marketing
Some Areas of Specialization:

- Biophysics
- Biochemistry
- Cellular and Molecular Biology
- Genetics
- Immunology
- Pathology
- Pharmacology
- Physiology
- Virology
BIOINFORMATICS

- Algorithm and Statistical Techniques
- Data Analysis and Interpretation
- Information Management
- Organization and Retrieval
EDUCATION

Teaching
- HIGH SCHOOL
- COMMUNITY COLLEGE
- UNIVERSITY
- MUSEUMS
- HEALTH EDUCATOR

Academic Environment
- ACADEMIC ADVISOR
- PROGRAM MANAGER
- COLLEGE COUNSELOR
- CAREER COUNSELOR
- ADMISSIONS OFFICER
MENTAL HEALTH

- SOCIAL WORKER (MSW)
- PSYCHOTHERAPIST (LMFT/LCSW/LPCC)
- EDUCATIONAL PSYCHOLOGIST
- SUBSTANCE ABUSE COUNSELOR
- GENETIC COUNSELOR
- HEALTH PSYCHOLOGY
- MILITARY PSYCHOLOGIST
- PSYCHIATRIST (MD)
- PSYCHOLOGIST (PHD/PSYD)
- PSYCHIATRIC NUSING
In general, FDA regulates:

- **Foods**
- **Drugs**
- **Biologics**
- **Medical Devices**
- **Electronic Products that give off radiation**
- **Cosmetics**
- **Veterinary Products**
- **Tobacco Products**

### Advertising
- The **Federal Trade Commission** is a federal agency that regulates many types of advertising.

### Alcohol
- The **Department of the Treasury’s Alcohol and Tobacco Tax and Trade Bureau (TTB)**

### Consumer Products
- The **Consumer Product Safety Commission (CPSC)** works to ensure the safety of.

### Drugs of Abuse
- The **Department of Justice’s Drug Enforcement Administration (DEA)**

### Meat and Poultry
- The **U.S. Department of Agriculture’s Food Safety and Inspection Service**

### Pesticides
- The **Environmental Protection Agency (EPA)** regulates many aspects of pesticides. EPA

### Vaccines for Animal Diseases
- The **U.S. Department of Agriculture’s Animal and Plant Health Inspection Service**

### Water
- The **Environmental Protection Agency (EPA)**
What will you need to pursue this field?

- Graduate school
- Professional school
- Courses
- Certifications
- ???
Ideas need action for something to happen - Next steps

- Talk to people! Informational interviews
- Speak to your professors
- Read the news/journals related to your studies
- Check out professional association websites
- Attend the conferences if possible
- Attend Employer Information sessions & career fairs
- Review graduate programs – what do the grads do
- UCLA ONE
- LinkedIn
Ideas need action for something to happen - Next steps:

- Join listserve of your academic department
- Join a club – often have guest speakers
- Attend career events at the Career Center
- Look through jobs that are posted – indeed.com; LinkedIn
- Attend open house or webinar for academic programs of interest
- Watch Career Center webinars on YouTube!
Ideas need action for something to happen - Next steps:

- Do an internship in the field
- Do research in a department of interest
- Volunteer / Shadow professionals
- Attend academic workshops and symposiums
- Review company websites to see what they do, who they hire
Resources

- O*Net Online: https://www.onetonline.org/
- Pre-Health at UCLA website: https://prehealth.ucla.edu/
- https://explorehealthcareers.org/
- Career Center YouTube: https://www.youtube.com/user/UCLACareerCenter/featured
24/7 Digital Resources

Handshake
Access the Career Center’s workshops, panels, job board, recruiting events, appointments, and virtual resources.

vmock
Get detailed feedback on your resume’s content and format anytime, anywhere, 24/7.

Parker Dewey
Apply for paid, micro-internship opportunities for students of all majors, class years, and degree levels.

Forage
Complete virtual work experience programs designed by top companies to build competitive skills.

Focus2
Match your interests, personality, values, and skills to different career options. Explore different occupations and build a personalized career plan.

Vault
Gain access to over 120 industry-specific career guides from accounting and law, to biotech and real estate.

GoinGlobal
Peruse over 100 country and international city career guides. Access an international job and internship search portal and a H1B sponsorship database.

Watch recorded webinars on a wide variety of career topics on the Career Center’s YouTube Channel: https://www.youtube.com/@UCLACareerCenter/featured
Virtual/In-Person Career Advising
30-minute 1:1 consultations are available Monday – Friday. Schedule an appointment through Handshake.

Virtual/In-Person Drop-in Sessions
15-minute sessions are available every Tues – Thurs from 10 AM - 12 PM & 1 PM – 3 PM to discuss resume/cover letter reviews, job/internship search, or interview skills.

Virtual/In-Person Events & Workshops
Access a variety of career education workshops and programs around everything from job/internship search to interviewing to graduate or professional school preparation.

Virtual/In-Person Employer Information Sessions
Employers host forums to keep students informed of job & internship opportunities and their recruitment processes.

On-Campus Recruiting
Employers schedule On-Campus Interviews attached to jobs postings in Handshake.

Articles & Digital Resources
Our website offers a wide range of articles and resources to offer expert tips and up-to-date career advice. Access information anytime, anywhere.
Questions?

Thank you!