

## Searching for Opportunity

Biomedical Engineering  
Georgia Institute of Technology

LFBOST

### Topics

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- Searching is a “Project”
- What’s your “Brand”
- Methods and places to search
- Resume writing methods and skills
- Interview skills
- Follow-up

### So you are a Biomedical Engineer...

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- From Georgia Tech
- Wikipedia: design engineer is often expected to have the following qualifications:
  - Bachelor of Science degree in engineering from an accredited institution
  - experience or knowledge in manufacturing and fabrication, or construction methods
  - a thorough understanding of statistical quality control
  - an understanding of marketing and project management

### Opportunity Search

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- Opportunity searching is a project!
- Plan-it!
  - Analysis of your interests, skills, wants, needs
  - Write an Initial Project Statement (IPS)
  - Search for alternatives
  - Review and evaluate alternatives
  - Develop actions plans

### Start with Yourself

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- What makes you unique
  - Background, training, internship/work experience, cultural background
- What are you **great** at?
- What are you not great at?
- What appeals to you?
- What do you want to do?

### Start with Yourself

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- Where do you want to live?
- Where do you not want to live?
- ???

## Start with Yourself

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- Write all this down !
- Your personal
  - *Engineering Design Specification*
  - *Project Plan – Gantt chart or other*

## Job Search - Targets

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- Types of jobs
- Markets
- Companies
- Locations
- “Who do you know” in these companies
- Most jobs are filled by referrals...

## Potential Opportunities

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- Product engineering design
- Biomaterials development engineer
- Technical medical product sales
- Product quality assurance and control
- Regulatory affairs
- FDA device reviewer or field inspector
- Patent reviewer (USPTO.gov)

## Graduate Studies ?

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- BME (Masters or PhD programs)
- Medical school
- Law school
- Masters in Industrial Design (MID)
- Business school (MBA)
- other

## Research a target market

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- [868](#) Anesthesiology
- [870](#) Cardiovascular
- [862](#) Clinical Chemistry and Clinical Toxicology
- [872](#) Dental
- [874](#) Ear, Nose, and Throat
- [876](#) Gastroenterology and Urology
- [878](#) General and Plastic Surgery
- [880](#) General Hospital and Personal Use
- [864](#) Hematology and Pathology
- [866](#) Immunology and Microbiology
- [882](#) Neurology
- [884](#) Obstetrical and Gynecological
- [886](#) Ophthalmic
- [888](#) Orthopedic
- [890](#) Physical Medicine
- [892](#) Radiology

From FDA Website: <http://www.fda.gov/cdrh/devadvice/3131.html>

## Places

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- Large Medical Device Company (\$5 bil+)
  - specialized subsidiary
- Midsize Company (\$500 mil to \$5 bil)
- Small Company (\$100 – 500 mil)
- Medical Device Supplier (<\$100 mil)
  - OEM materials and product components
- Start-up Company (\$0 - \$5 mil)

## Places

- US Food & Drug Administration (FDA)
- Patent and Trademark Office (USPTO)
- Universal Laboratories (UL)

## Resources - Industry

- **AdvaMed (Advanced Medical Technology Association)**
  - [www.advamed.org](http://www.advamed.org)
- **MDMA (Medical Device Manufacturers Association)**
  - [www.medicaldevices.org](http://www.medicaldevices.org)
- **Medical Device Suppliers**
  - [www.devicelink.com](http://www.devicelink.com)
- **Regulatory Affairs Professional Society**
  - [www.raps.org](http://www.raps.org)
- **Society of Biomaterials**
  - [www.biomaterials.org](http://www.biomaterials.org)

## Resources - Regional Associations

- **Georgia Biomedical Partnership**
  - [www.gabio.org](http://www.gabio.org)
- **North Carolina Medical Device Organization**
  - [www.ncmedicaldevice.org](http://www.ncmedicaldevice.org)
- **Massachusetts Medical Device Industry Council**
  - <http://www.masstech.org>
- **Minneapolis Area Life Science Alley**
  - <http://www.lifesciencealley.org>
- **Wisconsin Biotech**
  - <http://www.wisconsinbiotech.org>
- **Indiana Medical Device Manufacturers Council**
  - <http://www.imdmc.org/>

## Resources - Regional Associations

- **Michigan Mfg and Suppliers Assoc. (MMD&SA)**
  - <http://www.mmda.org/>
- **State of Washington Biotechnology & Biomedical Assoc.**
  - <http://www.wabio.com>
- **Southern California Biomedical Council**
  - <http://www.socalbio.org>
- **Oregon BioScience Online**
  - <http://www.oregon-bioscience.com>
- **BIOCOM/San Diego**
  - <http://www.biocom.org>
- **Florida Biomedical Society**
  - <http://www.florida-biomed-society.org>
- **Canada Medical Devices**
  - <http://www.medec.org>

## Resources - Regulatory

- **US Food & Drug Administration (FDA)**
  - [www.fda.gov](http://www.fda.gov)
- **FDA Medical Device Information**
  - [www.fda.gov/cdrh](http://www.fda.gov/cdrh)
- **International Standards Organization (ISO)**
  - [www.iso.org](http://www.iso.org)
- **ISO Auditor for Medical Device Companies**
  - British Standards Institute - [www.bsi-global.com](http://www.bsi-global.com)
  - TÜV - [www.tuvamerica.com](http://www.tuvamerica.com)
  - SGS - [www.us.sgs.com](http://www.us.sgs.com)

## Resources - FDA Device Advice

The screenshot shows the FDA Device Advice website. At the top, it features the FDA logo and the text "U.S. Food and Drug Administration" and "CENTER FOR DEVICE AND RADIATIONAL HEALTH". Below this is a search bar with the text "DEVICE ADVICE" and a search button. The main content area is titled "Device Advice is CDREH's self-service site for medical device and radiation emitting product information. Device Advice is an interactive system for obtaining information concerning medical devices." and includes a search bar with "Enter search term" and "Device Advice" buttons. Below the search bar is a grid of 16 links to various regulatory topics, such as "Guidance Documents", "CDRH Database", "List of Federal Regulations", "Regulatory Manuals", "International Information", "Consumer Information", "Overview of Regulations", "Is Your Product Registered?", "Classify Your Device", "Classify Your Product and Registration?", "Reporting Your Establishment", "Licensing Your Device", "Annual Registration (FD-350)", "21 CFR Part 807", "Investigational Device Exemptions (IDE)", "Premarket Approval", "Quality Systems", "Medical Device Labeling", "Medical Device Reporting", "Medical Device Recall", "Importing Devices", "Exporting Devices", "Medical Device Tracking", and "Postmarket Surveillance System".

## Resources

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- Monster.com
- Jobs.net
- [www.ihirebiotechnology.com](http://www.ihirebiotechnology.com)

## Research the Company!

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- “Google” it
  - Explains background, areas of focus, markets, subsidiaries, products
- If a public company, review the annual report
  - Explains background, areas of focus, markets, subsidiaries, products, competitors, products in the development pipeline, financial information
  - Often posted on website under “Investor Relations”
  - [www.sec.gov](http://www.sec.gov) – Filings & Forms (EDGAR)
    - Annual report – 10(K)
    - Latest quarterly data – 10(Q)

## Research the Company!

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- Look at management & their backgrounds
- Look at Board of Directors & backgrounds
- Many companies have an “Employment Opportunities” section on their website
- Do one of your professors have a contact with this company?

## Target a Specific Person

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- Find out who is the head of:
  - Research & Development
  - Engineering design
  - Responsible for product development
- By calling company, subsidiary, etc.
- They will know of potential open, open, or planned additions
- Contact that person by phone
- Send cover letter to most senior contact you can locate
  - Maybe don’t attach your résumé...
- Don’t send résumé to Human Resources

## Cover Letter

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- Send to a specific person
- Opening paragraph expressing your interest in company and type of opportunity you are interested in
  - Engineering product development
  - Lab development
  - Field sales for medical devices
- Bullet point essential information & key experience
- Hook - ask for interview; telephone, personal session

## Resume Writing

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- Target résumé to a specific company
- Be specific in your “objective”
- Entries reverse chronological order
- Experience
  - List internships, lab assistant, etc.
- Education
  - 2008 Bachelor of ...., Georgia Institute of Technology, Atlanta, GA; With emphasis on...

## Resume Writing Methods and Skills

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- Layout professionally
- Proof read...
  - Have an "interested person" read
  - If you have worked in someone's lab
  - A PhD candidate friend
- Have someone else proof read *again!*

## "Business" Card – an essential

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- Name
- "Title"
- Wallace H. Coulter ...
- Contact address (where you receive mail)
- Telephone (mobile) Number
- Email Address
- See [www.Avery.com](http://www.Avery.com) for free template program; purchase blank cards for printing at an office supply

## Interview Essentials

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- Arrive early
- Dress neatly and professionally
  - Sport coat, etc is ok
  - Don't need a dark suit
  - Search "business casual" and look at examples
- Have your business card
- Several copies of your resume
- Copy of a "design project book"
- Turn off your mobile phone!

## Interview Essentials

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- Don't "lead" with your résumé
- Have a 2 minute introduction about yourself
  - Background
  - Work related experiences
  - Type of "activity" you want to be involved in...
- Have a "show & tell" ...
  - Design project book
  - Photos on you in lab and project sequence
    - approved by your professor

## Interview skills

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- What makes you unique.
  - Background, training, internship/work experience, cultural background
- What appeals to you.
- Use good body posture
- 1 minute answers
  - Crisp answers
  - Leave openings for interviewer ask follow-up questions

## Typical Interviewer Questions

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- What are you really good at?
- What has been your greatest accomplishment?
- What would you change?
- What do you want to work for my company?
- What do you want to accomplish in the next 2-3 years?
- Where do you see yourself in next 5-10 years?

## Questions to Ask Interviewer

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- Something relating to new products the company has in development.
- What type of training experiences are available to new employees?
- Would I have the opportunity to get out and interface with the users of the company's products?
- What departments are on a project team?
- How large are project teams?

## Questions to Ask Interviewer

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- Are there be opportunities to work on a variety of project teams?
- Do employees have the ability to gain experience in different departments?
- Ask the interviewer – how long have they been with the company, what attracted you to the company, where did they start, etc.
- When is company making decision on filling position?
- Who make the final decision on hiring for this position?

## Follow-up

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- Within 24 hours
- Email
- Personal hand written note is better
  - Personalized note paper & envelopes
- Typed letter is also good
- Hook – ask a question...
  - Or – I will contact/call you in ...