WOMEN IN ENGINEERING 2011

Notes from CHOOSING YOUR SPECIALISATION

1. **SUGGESTIONS ON WHAT TO ASK YOURSELF**

    a. **What course did I enjoy the LEAST this year? Why?**
        i. Example – ENGGEN 131 Engineering Computation and Software Development

            ? – Software Engineering

            ? – Engineering Science

            ? – Mechatronics Engineering

    b. **What course did I enjoy the MOST this year? Why?**
        i. Example – ENGSCI 111 Mathematical Modelling 1
            ✓ Engineering Science
        ii. Example – ENGGEN 115 Introduction to Engineering Design
            - Mechanical Engineering
            - Mechatronics Engineering

    c. **What do I want to LEARN about?**
        i. Modelling of vascular networks
        ii. Food process engineering
        iii. Soil mechanics
        iv. Microcomputers
        v. Transmission lines
        vi. Operations research
        vii. Manufacturing
        viii. Analog circuits
        ix. Human computer interaction

    Check out Degree Specialisations on pg 32 and Course Prescriptions on pg 99 of the **Undergraduate Handbook** (available at the Student Centre)

d. What are the job prospects?

i. Check out career websites like seek.co.nz and trademe.co.nz to look at what jobs are currently available

ii. Check out Department of Labour website (www.dol.govt.nz) for statistics on industries that are forecast to grow to 2015 –

- Electricity, gas and water supply
- Machinery and equipment manufacturing
- Food, beverage and tobacco manufacturing
- Metal products manufacturing
- Forestry and logging
- Wood and paper products manufacturing
- Construction etc.

iii. The good news for engineering students:

- Additional 1,300 engineering professionals required every year over the next five years
- Plus 500 engineers per annum required to replace retiring engineers
- High ongoing expenditure growth across infrastructure-related industries
- 1,200 to 1,500 people graduating with professional engineering qualifications every year so there is a DEMAND for people with your skills and qualifications

2. SUGGESTIONS ON WHAT TO ASK OTHER PEOPLE

a. Departmental staff

i. What is the specialisation about?

ii. What can I expect to learn?

iii. What is a good alternative if I don't get in?

- Example – Engineering Science is a good alternative to Biomedical Engineering as you will have the option of taking some Biomedical Engineering courses as your electives

b. Other engineering students

i. What do you like about the specialisation?

ii. What don't you like the specialisation?

iii. What courses did you enjoy or not enjoy in first year that made you choose their specialisation? Why?

iv. (For Part IV students) How many job offers have you had? Have you seen many graduate jobs to apply for in that specialisation?

c. Engineering professionals

i. What do you like about your job?
ii. What do you dislike about your job?
iii. How many job offers did you have when you graduated?
iv. What are the possible career paths?
v. What challenges do you face in your job/career?

3. WHERE TO GET MORE INFORMATION

a. Part II Information Fair *(come prepared with questions)*

- Tuesday 27 September
- 11am-3pm
- Engineering Atrium

b. Specialisation Q&A Forum *(come prepared with questions)*

- Tuesday 18 October
- 2-3pm
- Lecture theatre 432.342

c. Part IV project presentations and posters

Department	**Presentations/Exhibitions**
Chemical & Materials	Wednesday 19 October Thursday 20 October
Civil & Environmental	Saturday 8 October
Electrical & Computer	Friday 16 September
Engineering Science & Biomedical	*TBC (early to mid October)*
Mechanical	Saturday 1 October (presentations) Friday 7 October (display)

Check departmental websites for more information

Project posters from previous years are also on display in some departments:

- Civil & Environmental Engineering – Level 10 and 11
- Engineering Science – Level 2 of 70 Symonds St
- *Check with departmental staff*

d. Faculty website

- Check out www.engineering.auckland.ac.nz for possible research projects – go to Department -> Our research -> Research projects available to students

e. Industry website

- Check out www.futureintech.org.nz for graduate profiles

f. Women in Industry

Wednesday 5 October	Thursday 6 October
Biomedical	Engineering Science
Chemical & Materials	Mechanical
Civil & Environmental	Mechatronics
Computer Systems	Software
Electrical & Electronic	

- 15-minute presentations (6.30-7.45pm) from engineering graduates who work in industry
- Q&A afterwards over pizza and juice

4. WHO GETS INTO WHAT

a. You need to pass a minimum of 90 points in Part I

i. 6 out of your 8 courses (can include your Gen Ed course)
ii. Must include ENGSCI 111 Mathematical Modelling I
iii. Might include another Part 1 course depending on the specialisation
   - ELECTENG 101 for Electrical & Electronic Engineering and Computer Systems
   - ENGGEN 131 for Computer Systems and Software Engineering
   - ENGGEN 121 for Mechanical Engineering
   - *Need more details? Then contact one of the Part II Course Advisers (go to departmental website -> Our staff)*

b. Number of places

Specialisation	Number of places
Biomedical	25
Chemical & Materials	70
Civil & Environmental	200
Computer Systems	55
Electrical & Electronic	110
Engineering Science	35
Mechanical	90
Mechatronics	60
Software	60

c. Criteria

i. How many students are applying for a specialisation
ii. Your GPA for your Engineering courses only compared to other students applying for that specialisation
    - Minimum 2.0
    - Preferably 6.0 or higher to have a good chance of getting your first choice of specialisation
    - Check your GPA in Student Services Online

d. Process

i. Online application will be available **3 October to 18 November** at www.engineering.auckland.ac.nz/uoa/choose-your-specialisation
ii. No guarantee of a place in your preferred specialisation
iii. You need to specify your top three choices
iv. Results will come out after **Wednesday 15 February** (note that Semester One 2012 starts Monday 27 February so you will need to enrol in your classes as soon as you get your results)
v. Some students with GPA's of 6.5 or higher may find out before the end of 2011

e. Summer School

i. To get into Part II, you will need to do Summer School if
    - You started Part I in Semester Two of 2011
    - You fail more than two of your Part 1 courses
ii. Your Part I GPA will include your failed course(s)
iii. You cannot take Summer School for courses that you have already passed
iv. Summer School details are available on www.auckland.ac.nz/uoa/cs-summer-school and in the Summer School Handbook (available at the Student Centre)
v. You can now enrol for Summer School now on Student Services Online