

## General Biomedical Engineering Majors, Senior/Alumnus Application: Glide Year(s)

| YEAR OF PROGRAM                           | FALL  | SPRING                       | SUMMER  |
|---|---|------------------------------|---|
| <b>FRESHMAN</b>                           | Chem 131  | Chem 132                     | Volunteer/meaningful clinical/research employment |
|   | Mth 161/ Mth 141                                  | Mth 162/ Mth 142             | Mth 143   |
|   | WRT 105   | Cluster                      |   |
|   | Major 1   | Major 2                      |   |
| <b>SOPHOMORE</b>                          | Organic Chem 203 w/ lab                           | Organic Chem 204 w/ lab      | Volunteer/meaningful clinical/research employment |
|   | Bio 110   | Bio 111 w/ lab               |   |
|   | Cluster   | Major 4                      |   |
|   | Major 3   | Major 5                      |   |
|   | Volunteer/meaningful clinical/research employment |                              |   |
| <b>JUNIOR</b>                             | Phys 113 w/ lab                                   | Phys 114 w/ lab              | Volunteer/meaningful clinical/research employment |
|   | Stt 212   | Major 7                      |   |
|   | Major 6   | Major 8                      |   |
|   | Cluster   | Cluster/Elective             |   |
|   | Volunteer/meaningful clinical/research employment |                              |   |
| <b>SENIOR</b>                             | Bio 198 w/ lab                                    | Bio250 w/ lab                | Volunteer/meaningful clinical/research employment |
|   | Major 8   | Major 11                     |   |
|   | Major 9   | Major 12                     |   |
|   | Cluster/Elective                                  | Cluster/Elective             | MCAT  |
|   | Volunteer/meaningful clinical/research employment |                              |   |
| <b>Apply for glide year(s) activities</b> |   |                              |   |
| <b>GLIDE YEARS</b>                        | Advanced Science courses/lab/work                 | Advanced Science courses/lab | <b>Apply by June 1st</b>                          |
|   |   | MCAT (if not taken already)  |   |
|   | Interview   |                              | <b>Matriculate (End of summer)</b>                |

\*This is a GENERAL schedule of courses; depending on particular concentration, each student's courses will vary.

\*Additional science electives can, and should be, fulfilled by Bio 111/113 w/ lab; 198 w/ lab ; Bio 250 w/ lab.

\*Organic chemistry should be taken junior year in order to spread out challenging courses as much as possible.

### **Pros:**

- Include senior design project and recommendations stemming from project.
- More opportunity to space out challenging pre-requisite and engineering courses.

### **Cons:**

- Challenging to complete pre-requisites during the academic school year so it is likely that some courses will need to be done in the summer session. Unless extenuating circumstances exist, students should plan on taking summer courses at UR.
- Spend time investigating and applying to Glide year programs/jobs/activities.
- Additional time until you are a physician can be expensive.

## General Biomedical Engineering Majors, Junior Application: Direct Matriculation

| YEAR OF PROGRAM  | FALL   | SPRING  | SUMMER   |
|------------------|--|---|--|
| <b>FRESHMAN</b>  | Chem 131   | Chem 132  | Volunteer/meaningful clinical/research employment                    |
|                  | Mth 161/ Mth 141   | Mth 162/ Mth 142  | Mth 143  |
|                  | WRT 105  | Cluster   |  |
|                  | BME 101  | Phys 121  |  |
| <b>SOPHOMORE</b> | BME 201 w/ lab   | BME 210   | Volunteer/meaningful clinical/research employment                    |
|                  | Bio 110  | Mth 164   | If necessary for scheduling:<br>Bio 110/111 w/ lab<br>Bio 198 w/ lab |
|                  | Mth 163 or 165   | Cluster   |  |
|                  | Phys 122   | Eng conc. course or science elective (Bio 111/113 w/L)    |  |
|                  | Volunteer/meaningful clinical/research employment cont'd |   |  |
| <b>JUNIOR</b>    | Science elective: Organic Chem 203 w/ lab                | Science elective (unless optics): Organic Chem 204 w/ lab | Volunteer/meaningful clinical/research employment                    |
|                  | BME 230  | BME 221/099 L   |  |
|                  | Eng conc. Course, sci. elective OR STT 212*              | BME 245 w/ L  |  |
|                  | Cluster or Eng Conc. Course)                             | Bio 250 w/ L  |  |
|                  |  | MCAT (Score by July 1 <sup>st</sup> )                     | Apply by June 1 <sup>st</sup>  |
|                  | Volunteer/meaningful clinical/research employment cont'd |   |  |
| <b>SENIOR</b>    | BME 295  | BME 296   | Volunteer/meaningful clinical/research employment                    |
|                  | BME 260  |   |  |
|                  | Conc. Course (ULW)                                       |   |  |
|                  | Eng Conc. Course   |   |  |
|                  | Interview  |   | Matriculate (end of summer)  |
|                  | Volunteer/meaningful clinical/research employment cont'd |   |  |

\*It is generally recommended for students to complete a statistics course.

### Pros:

- No need to spend time applying for glide year projects/activities/jobs.
- Less expensive to begin career as a physician earlier.

### Cons:

- Applying as a junior means applying without the benefit of the senior design project.
- GPA and references will not be as strong as they could be if they included senior year.
- Less mature of a candidate.
- Medical school interviews take place during senior year.

## Biomechanical Engineering, Junior Application: Direct Matriculation

| YEAR OF PROGRAM  | FALL   | SPRING                                | SUMMER  |
|------------------|--|---------------------------------------|---|
| <b>FRESHMAN</b>  | Chem 131   | Chem 132                              | Volunteer/meaningful clinical/research employment           |
|                  | Mth 161/ Mth 141   | Mth 162/ Mth 142                      | Mth 143   |
|                  | WRT 105  | Cluster                               |   |
|                  | BME 101  | Phys 121                              |   |
| <b>SOPHOMORE</b> | BME 201 w/ lab   | BME 210                               | Volunteer/meaningful clinical/research employment           |
|                  | Bio 110  | Mth 164                               |   |
|                  | Mth 163or 165  | Cluster                               |   |
|                  | Phys 122   | ME 226                                | Bio111 w/ lab<br>Bio 250 w/ lab *                           |
|                  | Volunteer/meaningful clinical/research employment cont'd |                                       |   |
| <b>JUNIOR</b>    | Organic Chem 203 w/ lab                                  | Organic Chem 204 w/ lab               | Volunteer/meaningful clinical/research employment           |
|                  | BME 230  | BME 221/099 L                         |   |
|                  | Bio 198 w/ lab   | BME 245 w/ L                          |   |
|                  | STT 212**  | ME123                                 |   |
|                  |  | MCAT (Score by July 1 <sup>st</sup> ) | Apply by June 1 <sup>st</sup>                               |
|                  | Volunteer/meaningful clinical/research employment cont'd |                                       |   |
| <b>SENIOR</b>    | BME 295  | BME 296                               | Volunteer or meaningful clinical and/or research employment |
|                  | BME 260  | Elective                              |   |
|                  | ULW BME  | Elective                              |   |
|                  | ME225  | Cluster                               |   |
|                  | Interview  |                                       | Matriculate (end of Summer)                                 |
|                  | Volunteer/meaningful clinical/research employment cont'd |                                       |   |

\*Student will need to obtain special permission to take Bio 250 without pre-requisite Bio 198.

\*\*It is generally recommended for students to complete a statistics course.

### Pros:

- No need to spend time applying for glide year projects/activities/jobs.
- Less expensive to begin career as a physician earlier.

### Cons:

- Applying as a junior means applying without the benefit of the senior design project.
- GPA and references will not be as strong as they could be if they included senior year.
- Less mature of a candidate.
- Medical school interviews take place during senior year.

## BioSignals Engineering, Junior Application: Direct Matriculation

| YEAR OF PROGRAM  | FALL   | SPRING                                | SUMMER  |
|--|--|---------------------------------------|---|
| <b>FRESHMAN</b>  | Chem 131   | Chem 132                              | Volunteer/meaningful clinical/research employment |
|  | Mth 161/ Mth 141   | Mth 162/ Mth 142                      | Mth 143   |
|  | WRT 105  | Cluster                               |   |
|  | BME 101  | Phys 121                              |   |
| <b>SOPHOMORE</b>   | BME 201 w/ lab   | BME 210                               | Volunteer/meaningful clinical/research employment |
|  | Bio 110  | Mth 164                               |   |
|  | Mth 163or 165  | Cluster                               |   |
|  | Phys 122   | Bio111/113 w/ lab                     | Bio 198 w/ lab *                                  |
|  | Volunteer/meaningful clinical/research employment cont'd |                                       |   |
| <b>JUNIOR</b>  | Organic Chem 203 w/ lab                                  | Organic Chem 204 w/ lab               | Volunteer/meaningful clinical/research employment |
|  | BME 230  | BME 221/099 L                         |   |
|  | ECE221/BME228  | BME 245 w/ L                          |   |
|  | STT 212*   | Bio 250 w/ lab                        |   |
|  |  | MCAT (Score by July 1 <sup>st</sup> ) | Apply by June 1 <sup>st</sup>                     |
|  | Volunteer/meaningful clinical/research employment cont'd |                                       |   |
| <b>SENIOR</b>  | BME 295  | BME 296                               | Volunteer/meaningful clinical/research employment |
|  | BME 260  | ULW BME                               |   |
|  | ECE 230  | Elective                              |   |
|  | ECE 246  | Cluster                               |   |
|  | Interview  |                                       | Matriculate (end of Summer)                       |
| Volunteer/meaningful clinical/research employment cont'd |  |                                       |   |

\*It is generally recommended for students to complete a statistics course.

### **Pros:**

- No need to spend time applying for glide year projects/activities/jobs.
- Less expensive to begin career as a physician earlier.

### **Cons:**

- Applying as a junior means applying without the benefit of the senior design project.
- GPA and references will not be as strong as they could be if they included senior year.
- Less mature of a candidate.
- Medical school interviews take place during senior year.

## Cell & Tissue Engineering, Junior Application: Direct Matriculation

| YEAR OF PROGRAM  | FALL   | SPRING                                | SUMMER  |
|--|--|---------------------------------------|---|
| <b>FRESHMAN</b>  | Chem 131   | Chem 132                              | Volunteer/meaningful clinical/research employment |
|  | Mth 161/ Mth 141   | Mth 162/ Mth 142                      | Mth 143   |
|  | WRT 105  | Cluster                               |   |
|  | BME 101  | Phys 121                              |   |
| <b>SOPHOMORE</b>   | BME 201 w/ lab   | BME 210                               | Volunteer/meaningful clinical/research employment |
|  | Bio 110  | Mth 164                               |   |
|  | Mth 163or 165  | Cluster                               | STT 212*  |
|  | Phys 122   | CHE 243                               | Bio 111 w/ lab                                    |
|  | Volunteer/meaningful clinical/research employment cont'd |                                       |   |
| <b>JUNIOR</b>  | Organic Chem 203 w/ lab                                  | Organic Chem 204 w/ lab               | Volunteer/meaningful clinical/research employment |
|  | BME 230  | BME 221/099 L                         |   |
|  | CH 244   | BME 245 w/ L                          |   |
|  | Bio 198 w/ lab   | Bio 250 w/ lab                        |   |
|  |  | MCAT (Score by July 1 <sup>st</sup> ) | Apply by June 1st                                 |
| Volunteer/meaningful clinical/research employment cont'd |  |                                       |   |
| <b>SENIOR</b>  | BME 295  | BME 296                               | Volunteer/meaningful clinical/research employment |
|  | BME 260  | ULW BME                               |   |
|  | BIO 210  | Elective                              |   |
|  | CHE 225  | Cluster                               |   |
|  | Interview  |                                       | Matriculate (end of Summer)                       |
| Volunteer/meaningful clinical/research employment cont'd |  |                                       |   |

\*It is generally recommended for students to complete a statistics course.

### **Pros:**

- Direct entry to medical school can be less expensive.
- Begin medical career at a slightly younger age.
- No need to spend time to investigate and apply to glide year programs/jobs/activities.

### **Cons:**

- Thesis work, recommendation letters from senior year classes and the improved GPA that is often seen in senior year will not be a part of application package.
- Besides the academic rigor in this program, student may be at a disadvantage compared to other applicants who have had more time to build their resumes and gain relevant experience and maturity.
- Limits student participation in study abroad programs to the summer months.
- Medical school interviews take place during senior year.

## Medical Optics Engineering, Junior Application: Direct Matriculation

| YEAR OF PROGRAM                                   | FALL  | SPRING                                | SUMMER  |
|---|---|---------------------------------------|---|
| <b>FRESHMAN</b>                                   | Chem 131  | Chem 132                              | Volunteer/meaningful clinical/research employment |
|   | Mth 161/ Mth 141                                  | Mth 162/ Mth 142                      | Mth 143   |
|   | WRT 105   | Cluster                               |   |
|   | BME 101   | Phys 121                              |   |
|   | Volunteer/meaningful clinical/research employment |                                       |   |
| <b>SOPHOMORE</b>                                  | BME 201 w/ lab                                    | BME 210                               | Volunteer/meaningful clinical/research employment |
|   | Bio 110   | Mth 164                               |   |
|   | Mth 163 or 165                                    | STT 212*                              |   |
|   | Phys 122  | BME 270                               | Bio111 w/ lab<br>Bio 250 w/ lab **                |
|   | Volunteer/meaningful clinical/research employment |                                       |   |
| <b>JUNIOR</b>                                     | Organic Chem 203 w/ lab                           | Organic Chem 204 w/ lab               | Volunteer/meaningful clinical/research employment |
|   | BME 230   | BME 221/099 L                         |   |
|   | OPT 241   | BME 245 w/ L                          |   |
|   | Bio 198 w/ lab                                    | OPT 261                               |   |
|   |   | MCAT (Score by July 1 <sup>st</sup> ) | Apply by June 1st                                 |
| Volunteer/meaningful clinical/research employment |   |                                       |   |
| <b>SENIOR</b>                                     | BME 295   | BME 296                               | Volunteer/meaningful clinical/research employment |
|   | BME 260   | Elective                              |   |
|   | Cluster   | Elective                              |   |
|   | ULW BME   | Cluster                               |   |
|   | Interview   |                                       | Matriculate (end of Summer)                       |
|   | Volunteer/meaningful clinical/research employment |                                       |   |

\*It is generally recommended for students to complete a statistics course.

\*\*Student will need to obtain special permission to take Bio 250 without pre-requisite Bio 198.

### Pros:

- Direct entry to medical school can be less expensive.
- Begin medical career at a slightly younger age.
- No need to spend time to investigate and apply to glide year programs/jobs/activities.

### Cons:

- Thesis work, recommendation letters from senior year classes and the improved GPA that is often seen in senior year will not be a part of application package.
- Besides the academic rigor in this program, student may be at a disadvantage compared to other applicants who have had more time to build their resumes and gain relevant experience and maturity.
- Limits student participation in study abroad programs to the summer months.
- Medical school interviews take place during senior year.