

Engineering Science

at Benedictine University

Why study engineering at Benedictine?

Benedictine University and the Illinois Institute of Technology (IIT) have partnered for more than 20 years to offer students a unique opportunity to earn an engineering degree while attending a liberal arts university. This program offers students the chance to take advantage of the strengths of both schools while earning a Bachelor of Arts (B.A.) in Engineering Science from Benedictine and a Bachelor of Science (B.S) in Engineering from IIT. The liberal arts-educated graduate is better prepared to compete in an environment where communication skills are rapidly becoming as important as technical ability.

How does the program work?

You must have a minimum 3.0 GPA to be accepted into the Benedictine/IIT Engineering program. A minimum of 45 semester credit hours must be completed at IIT. Once you are accepted into the program, you will be enrolled at both schools simultaneously, and will be able to enjoy the benefits of student activities and the use of facilities at both institutions.

Your initial classes are taken exclusively at Benedictine, where you will complete a sequence of courses comprising the Engineering Core, plus elective courses in social science and humanities. By your fifth semester, you will take courses at both institutions. During the final four semesters of the program, a majority of the classes are conducted at IIT's campus in Chicago.

Your academic work will include courses that are essential to all branches of engineering, including calculus, physics, chemistry, mechanics, electronics, computer programming and engineering graphics. You will take liberal arts courses in written and oral communications, technical writing, social science and electives of your choice.

Fields of study

IIT will prepare you in the following fields of study:

- Aerospace Engineering
- Architectural Engineering
- Biomedical Engineering-Cell and Tissue Track
- Biomedical Engineering-Medical Imaging
- Biomedical Engineering-Neural Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Mechanical Engineering

This program develops engineers who can communicate technical ideas to society.

BenU+IIT (Five-year Aerospace Engineering Program)
B.A. in Engineering Science at Benedictine/B.S. in Aerospace
Engineering at IIT

Benedictine University recently reformed its undergraduate curriculum and implementation begins in Fall 2014.

This recommended program of study is an example only and subject to change.

First Semester MATH 210 and 207 WRIT 101 ENGR 120 PHYS 211 and 205 ENGR 100	5 (BenU) (MATH 151) 3 (BenU) 2 (BenU) 5 (BenU) (Note 3) 1 (BenU)	Second Semester MATH 211 WRIT 102 PHYS 212 and 206 Psychology/Sociology elective ENGR 110	4 (BenU) (MATH 152) 3 (BenU) 5 (BenU) (Note 3) 3 (BenU) (Note 1) 3 (BenU)
Third Semester MATH 212 CHEM 113 and 114 CMSC 180 and 185 SPCH 110 Religious Studies/Theology elective	4 (BenU) (MATH 251) 4 (BenU) (CHEM 124) 4 (BenU) (MMAE 100) 3 (BenU) 3 (BenU) (Note 1)	Fourth Semester MATH 260 CHEM 123 and 124 CMSC 200 HUMN 220 ENGR 264	4 (BenU) (MATH 252) 4 (BenU) 4 (BenU) (CS 105) 3 (BenU) (Note 1) 3 (BenU) 18
Fifth Semester PHYS 213 ENGR 220 HUMN 230 Fine Arts/Music elective Philosophy elective Business/Economics elective	3 (BenU) (Note 3) 3 (BenU) (MMAE 200) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 3 (BenU) (Note 1)	Sixth Semester MS 201 MMAE 202 MMAE 313 MMAE 320 HUMN 240	3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (BenU) (Note 1) 15
Seventh Semester MMAE 311 MMAE 312 MMAE 315 MMAE 350 HUMN 250	3 (IIT) 3 (IIT) 4 (IIT) 3 (IIT) 3 (BenU) (Note 1) 16	Eighth Semester MMAE 304 MMAE 372 MMAE 443 MMAE 450 MMAE 452	3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 15
Ninth Semester MMAE 410 MMAE 411 MMAE 412 or 414 IPRO 497 Anthropology/Political Science elective Life Sciences elective	3 (IIT) 3 (IIT) 3 (IIT) (Note 4) 3 (IIT) 3 (BenU) (Note 1) 3 (BenU) (Note 2) 18	Tenth Semester MMAE 413 or 416 MMAE 415 MMAE 417, 418 or 472 IPRO 497 Literature/Foreign Language Literature elective	3 (IIT) (Note 4) 4 (IIT) 3 (IIT) 3 (IIT) 3 (BenU) (Note 1) 16 168 minimum
Note 1. Choose Humanities and Social Scie	nces electives from	Note 5. Consult your academic adviso	

Note 2.

approved courses.

Choose a Life Sciences course at Benedictine University.

Note 3. PHYS 211, 212, 213, 205, 206 (BenU) = PHYS 123, 221, 224 (IIT).

or the MMAE 414 and 416 sequence.

Student must choose either the MMAE 412 and 413 sequence

regarding the completion of approved courses in a summer

term to reduce your academic load in the fall or spring term.

Note 6. A minimum of 45 semester hours must be completed at IIT.

BenU+IIT (Five-year Mechanical Engineering Program)
B.A. in Engineering Science at Benedictine/B.S. in Mechanical
Engineering at IIT

Benedictine University recently reformed its undergraduate curriculum and implementation begins in Fall 2014.

This recommended program of study is an example only and subject to change.

First Semester MATH 210 and 207 ENGR 120 PHYS 211 and 205 WRIT 101 ENGR 100	5 (BenU) (MATH 151) 2 (BenU) 5 (BenU) (Note 3) 3 (BenU) 1 (BenU)	Second Semester MATH 211 WRIT 102 PHYS 212 and 206 Psychology/Sociology elective ENGR 110	4 (BenU) (MATH 152) 3 (BenU) 5 (BenU) (Note 3) 3 (BenU) (Note 1) 3 (BenU)
Third Semester MATH 212 CHEM 113 and 114 CMSC 180 and 185 SPCH 110 Religious Studies/Theology elective	4 (BenU) (MATH 251) 4 (BenU) (CHEM 124) 4 (BenU) (MMAE 100) 3 (BenU) 3 (BenU (Note 1) 18	Fourth Semester MATH 260 CHEM 123 and 124 CMSC 200 HUMN 220 ENGR 264	4 (BenU) (MATH 252) 4 (BenU) 4 (BenU) (CS 105) 3 (BenU) (Note 1) 3 (BenU) 18
Fifth Semester MMAE 232 PHYS 213 ENGR 220 Philosophy elective HUMN 230	3 (IIT) 3 (BenU) (Note 3) 3 (BenU) (MMAE 200) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 15	Sixth Semester MS 201 MMAE 202 MMAE 350 HUMN 240 Business/Economics elective Literature elective	3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 18
Seventh Semester MMAE 302 MMAE 305 MMAE 313 MMAE 320 HUMN 250	3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (BenU) (Note 1) 15	Eighth Semester MMAE 319 MMAE 321 MMAE 323 MMAE 332 Anthropology/Political Science elective	4 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (BenU) (Note 1) 16
Ninth Semester MMAE 419 MMAE 443 MMAE 445 MMAE 485 IPRO 497	4 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT)	Tenth Semester MMAE 432 MMAE 433 IPRO 497 Fine Arts/Music elective Life Sciences elective	3 (IIT) 3 (IIT) 3 (IIT) 3 (BenU) (Note 1) 3 (BenU) (Note 2) 15
		Total	165 minimum

approved courses.

Note 1. Choose Humanities and Social Sciences electives from

Note 2. Choose a Life Sciences course at Benedictine University.

PHYS 211, 212, 213, 205, 206 (BenU) = PHYS 123, 221 (IIT).

Note 4. Consult your academic advisor at Benedictine University

regarding the completion of approved courses in a summer term

to reduce your academic load in the fall or spring term.

Note 5. A minimum of 45 semester hours must be completed at IIT.

BenU+IIT (Five-year Electrical Engineering Program)
B.A. in Engineering Science at Benedictine/B.S. in Electrical
Engineering at IIT

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First Semester MATH 210 and 207 WRIT 101 PHYS 211 and 205 ENGR 100 ENGR 120	5 (BenU) (MATH 151) 3 (BenU) 5 (BenU) (Note 3) 1 (BenU) 2 (BenU) 16	Second Semester MATH 211 WRIT 102 PHYS 212 and 206 ENGR 110 Psychology/Sociology elective	4 (BenU) (MATH 152) 3 (BenU) 5 (BenU) (Note 3) 3 (BenU) 3 (BenU) (Note 1) 18
Third Semester MATH 212 CHEM 113 and 114 CMSC 180 and 185 SPCH 110 Religious Studies/ Theology elective	4 (BenU) (MATH 251) 4 (BenU) (CHEM 122) 4 (BenU) (ECE 100) 3 (BenU) 3 (BenU) (Note 1)	Fourth Semester MATH 260 CHEM 123 and 124 CMSC 200 ENGR 264 HUMN 220	4 (BenU) (MATH 252) 4 (BenU) (ECE science elective) 4 (BenU) (CS 115 and 116) 3 (BenU) 3 (BenU) (Note 1)
Fifth Semester (Note 5) ECE 211 ECE 218 CMSC 220 ENGR 220 PHYS 213	4 (IIT) 3 (IIT) 4 (BenU) (ECE 242) 3 (BenU) (MMAE 200) 3 (BenU) (Note 3)	Sixth Semester (Note 5) ECE 213 HUMN 230 MATH 371 Philosophy elective Business/Economics elective	4 (IIT) 3 (BenU) (Note 1) 3 (BenU) (MATH 474) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 16
Seventh Semester (Note MATH 333 ECE 307 ECE 311 IPRO 497 HUMN 240		Eighth Semester (Note 5) ECE 308 ECE 312 ECE 319 Life Sciences elective Anthropology/Political Science elective	3 (IIT) 4 (IIT) 4 (IIT) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 17
Ninth Semester (Note 5) Prof ECE elective Prof ECE elective IPRO 497 HUMN 250 Literature/Foreign Language Literature elective	4 (IIT) (Note 5) 3 (IIT) (Note 5) 3 (IIT) (Note 4) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 16	Tenth Semester (Note 5) Prof ECE elective Prof ECE elective Prof ECE elective Technical elective Fine Arts/Music elective Total	4 (IIT) (Note 5) 3 (IIT) (Note 5) 3 (IIT) (Note 5) 3 (BenU) 3 (BenU) (Note 1) 16 172 minimum

- Note 1. Choose Humanities and Social Sciences electives from approved courses.
- Note 2. Choose a Life Sciences course at Benedictine University.
- Note 3. PHYS C211, C205, C212, C206, 213 (BenU) = PHYS 123, 221, 224 (IIT).
- Note 4. Interprofessional projects may be taken at any time during the third, fourth or fifth years (course scheduling must be adjusted accordingly with advisor approval). IPROs are subject to the approval of your academic advisor. At lease one IPRO should have a significant technical content (at least 75 percent) an be viewed as a technical IPRO with the same definition as a technical elective.
- Note 5. Professional ECE electives may be chosen from any of the 400-level IIT ECE courses identified with (P) in the course descriptions. Courses at the 500 level may be taken with the written consent of the instructor, faculty advisor and the ECE department chair. At least two of the electives must contain laboratories. See the current IIT bulletin for more information. A maximum of three credits of ECE 491 undergraduate research or specialized programs ECE 497 may be used as a professional elective with advisor approval.
- Note 6. Consult your academic advisor at Benedictine University regarding the completion of approved courses in a summer term to reduce your academic load in the fall or spring term.
- Note 7. A minimum of 45 semester hours must be completed at IIT.

BenU+IIT (Five-year Civil Engineering Program)
B.A. in Engineering Science at Benedictine/B.S. in
Civil Engineering at IIT

First Semester MATH 210 and 207 WRIT 101 PHYS 211 and 205 ENGR 100 ENGR 120	5 (BenU) (MATH 151) 3 (BenU) 5 (BenU) (Note 3) 1 (BenU) 2 (BenU) (CAE 101) 16	Second Semester MATH 211 WRIT 102 PHYS 212 and 206 Psychology/Sociology elective ENGR 110	4 (BenU) (MATH 152) 3 (BenU) 5 (BenU) (Note 3) 3 (BenU) (Note 1) 3 (BenU)
Third Semester MATH 212 CHEM 113 and 114 CMSC180 and 185 SPCH 110 Religious Studies/ Theology elective	4 (BenU) (MATH 251) 4 (BenU) (CHEM 124) 4 (BenU) (CAE 100) 3 (BenU) 3 (BenU) (Note 1)	Fourth Semester MATH 260 CHEM 123 and 124 CMSC 200 HUMN 220 ENGR 264	4 (BenU) (MATH 252) 4 (BenU) 4 (BenU) (CS 105) 3 (BenU) (Note 1) 3 (BenU) (CAE 110 and 111) 18
Fifth Semester CAE 105 CAE 221 PHYS 213 ENGR 220 HUMN 230	3 (IIT) 3 (IIT) 3 (BenU) (Note 3) 3 (BenU) (MMAE 200) 3 (BenU) (Note 1) 15	Sixth Semester MMAE 202 MMAE 305 Philosophy elective Fine Arts/Music elective HUMN 240 Business/Economics elective	3 (IIT) 3 (IIT) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 3 (BenU) (Note 1)
Seventh Semester CAE 301 CAE 303 CAE 304 CAE 312 CAE 315 Life Sciences elective	3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (BenU) (Note 2) 18	Eighth Semester CAE 302 CAE 307 CAE 310 CAE 323 IPRO 497 HUMN 250	3 (IIT) 3 (BenU) (Note 1)
Ninth Semester CAE 419 CAE 431 CAE 457 CAE 470 CAE elective (400+ level) Anthropology/Political Science elective	3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (IBenU) (Note 1) 18	Tenth Semester CAE elective (400+ level) CAE 432 IPRO Capstone Design Technical elective Technical elective Literature/Foreign Language Literature elective	3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) (Note 4) 3 (IIT) (Note 4) 3 (BenU) (Note 1) 18
		Total	178 minimum

- Note 1. Choose Humanities and Social Sciences electives from approved courses.
- Note 2. Choose a Life Sciences course at Benedictine University.
- Note 3. PHYS 211, 212, 213, 205, 206 (BenU) = PHYS 123, 211, 224 (IIT).
- Note 4. Technical elective must be a 300+ level Science or Engineering elective.
- Note 5. Consult your academic advisor at Benedictine University regarding the completion of approved courses in a summer term to reduce your academic load in the fall or spring term.
- Note 6. A minimum of 45 semester hours must be completed at IIT.

BenU+IIT (Five-year Architectural Engineering Program)
B.A. in Engineering Science at Benedictine/B.S. in
Architectural Engineering at IIT

First Semester MATH 210 and 207 WRIT 101 PHYS 211 and 205 ENGR 100 ENGR 120	5 (BenU) (MATH 151) 3 (BenU) 5 (BenU) (Note 3) 1 (BenU) 2 (BenU) (CAE 101) 16	Second Semester MATH 211 WRIT 102 PHYS 212 and 206 Psychology/Sociology elective ENGR 110	4 (BenU) (MATH 152) 3 (BenU) 5 (BenU) (Note 3) 3 (BenU) (Note 1) 3 (BenU) 18
Third Semester MATH 212 CHEM 113 and 114 CMSC 180 and 185 SPCH 110 Religious Studies/ Theology elective	4 (BenU) (MATH 251) 4 (BenU) (CHEM 124) 4 (BenU) (CAE 100) 3 (BenU) 3 (BenU) (Note 1)	Fourth Semester MATH 260 CHEM 123 and 124 CMSC 200 HUMN 220 ENGR 264	4 (BenU) (MATH 252) 4 (BenU) 4 (BenU) (CS 105) 3 (BenU) (Note 1) 3 (BenU)
Fifth Semester CAE 105 CAE 208 AAH 119 PHYS 213 ENGR 220 HUMN 230	3 (IIT) 3 (IIT) 3 (IIT) 3 (BenU) (Note 3) 3 (BenU) (MMAE 200) 3 (BenU) (Note 1)	Sixth Semester MMAE 202 CAE 209 HUMN 240 Philosophy elective Business/Economics elective Eighth Semester	3 (IIT) 4 (IIT) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 16
Seventh Semester CAE 303 CAE 304 CAE 312 CAE 315 CAE 331 Life Sciences elective	3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT)	CAE 307 CAE 323 CAE 334 CAE 461 IPRO 497 HUMN 250	3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (BenU) (Note 1) 18
Ninth Semester CAE 464 CAE 468 CAE 470 Technical elective Technical elective Anthropology/Political Science elective		Tenth Semester CAE 469 CAE 471 Technical elective IPRO Capstone Design Course Literature/Foreign Language Literature elective Fine Arts/Music elective	2 (IIT) 3 (IIT) 3 (IIT) (Note 4) 3 (IIT) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 17
	17	Total	174 minimum

- Note 1. Choose Humanities and Social Sciences electives from approved courses.
- Note 2. Choose a Life Sciences course at Benedictine University.
- Note 3. PHYS 211, 212, 213, 205, 206 (BenU) = PHYS 123, 211, 224 (IIT).
- Note 4. Technical elective must be a 300+ level Science or Engineering elective.
- Note 5. Consult your academic advisor at Benedictine University regarding the completion of approved courses in a summer term to reduce your academic load in the fall or spring term.
- Note 6. A minimum of 45 semester hours must be completed at IIT.

BenU+IIT (Five-year Chemical Engineering Program)
B.A. in Engineering Science at Benedictine/B.S. in
Chemical Engineering at IIT

First Semester MATH 210 and 207 WRIT 101 ENGR 120 CHEM 113 and 114 ENGR 100 SPCH 110	5 (BenU) (MATH 151) 3 (BenU) 2 (BenU) 4 (BenU) 1 (BenU) 3 BenU) 18	Second Semester MATH 211 CHEM 123 and 124 WRIT 102 ENGR 110 Psychology/Sociology elective	4 (BenU) (MATH 152) 4 (BenU) (CHEM 125) 3 (BenU) 3 (BenU) 3 (BenU) (Note 1) 17
Third Semester MATH 212 PHYS 211 and 205 CMSC 180 and 185 CHEM 242 and 243	4 (BenU) (MATH 251) 5 (BenU) (Note 3) 4 (BenU) (CHE 100) 4 (BenU) (CHEM 237) 17	Fourth Semester MATH 260 PHYS 212 and 206 CMSC 200 CHEM 247 (BenU)	4 (BenU) (MATH 252) 5 (BenU) (Note 3) 4 (BenU) (CS 105) 3 (BenU) (CHEM 239) 16
Fifth Semester CHE 202 CHEM 313 PHYS 213 ENGR 220 HUMN 220 Philosophy elective	3 (IIT) 3 (BenU) (CHEM 343) 3 (BenU) (Note 3) 3 (BenU) (CHE 101) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 18	Sixth Semester CHE 301 CHE/IPRO 296 ENGR 264 CHEM 315 and 316 HUMN 230 Business/Economics elective	3 (IIT) 1 (IIT) 3 (BenU) (Technical elective) 4 (BenU) (CHEM 344) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 17
Seventh Semester CHE 302 CHE 311 CHE 351 ECE 215 or 218 Fine Arts/Music elective Literature/Foreign Language	3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (BenU) (Note 1)	Eighth Semester CHE 317 CHE 433 IPRO 497 CHE 451 Technical elective HUMN 240	2 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (BenU) (Note 1)
Literature elective Ninth Semester	3 (BenU) (Note 1) 18	Tenth Semester CHE 406 CHE 439	3 (IIT) 3 (IIT)
CHE 418 CHE 423 CHE 435 CHE 494 Religious Studies/Theology elective HUMN 250	2 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) e 3 (BenU) (Note 1) 3 (BenU) (Note 1)	IPRO 496 Technical elective Life Sciences elective Anthropology/Political Science elective	2 (IIT) 3 (IIT) 3 (IIT) 3 (BenU) (Note 2) 3 (BenU) (Note 1) 17
	17	Total	175 minimum

- Note 1. Choose Humanities and Social Sciences electives from approved courses.
- Note 2. Choose a Life Sciences course at Benedictine University.
- Note 3. PHYS 211, 212, 213, 205, 206 (BenU) = PHYS 123, 221 (IIT).
- Note 4. Consult your academic advisor at Benedictine University regarding the completion of approved courses in a summer term to reduce your academic load in the fall or spring term.
- Note 5. A minimum of 45 semester hours must be completed at IIT.

BenU+IIT (Five-year Computer Engineering Program) B.A. in Engineering Science at Benedictine/B.S. in Computer Engineering at IIT

First Semester MATH 210 and 207 SPCH 110 CHEM 113 and 114 WRIT 101 ENGR 120 ENGR 100	5 (BenU) (MATH 151) 3 (BenU) 4 (BenU) (CHEM 122) 3 (BenU) 2 (BenU) 1 (BenU)	Second Semester MATH 211 WRIT 102 CHEM 123 and 124 ENGR 110 Philosophy elective	4 (BenU) (MATH 152) 3 (BenU) 4 (BenU) (ECE Science elective) 3 (BenU) 3 (BenU) (Note 1)
Third Semester MATH 212 PHYS 211 and 205 CMSC 180 and 185 HUMN 220	4 (BenU) (MATH 251) 5 (BenU) (Note 3) 4 (BenU) (ECE 100) 3 (BenU) (Note 1) 16	Fourth Semester MATH 240 MATH 260 PHYS 212 and 206 CMSC 200	4 (BenU) (CS 330) 4 (BenU) (MATH 252) 5 (BenU) (Note 3) 4 (BenU) (CS 115 and 116) 17
Fifth Semester ECE 211 ECE 218 ENGR 220 CMSC 205 PHYS 213	4 (IIT) 3 (IIT) 3 (BenU) (MMAE 200) 3 (BenU) (CS 331) 3 (BenU) (Note 3) 16	Sixth Semester ECE 213 ENGR 264 Business/Economics elective HUMN 230 Religious Studies/Theology elective	4 (IIT) 3 (BenU) 3 (BenU) (Note 1) 3 (BenU) (Note 1) e 3 (BenU) (Note 1) 16
Seventh Semester ECE 311 CS 351 MATH 333 or 350 CMSC 220 HUMN 240	4 (IIT) 3 (IIT) 3 (IIT) 3 (BenU) (ECE 242) 3 (BenU) (Note 1) 16	Eighth Semester IPRO 497 MATH 371 CS 450 ECE 307, 308, 312, or 319 Fine Arts/Music elective Anthropology/Political Science elective	3 (IIT) (Note 4) 3 (BenU) (MATH 474) 3 (IIT) 3/4 (IIT) (Note 7) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 18/19
Ninth Semester ECE 441 CS 487 ECE 485 Professional ECE elective Life Sciences elective	4 (IIT) 3 (IIT) 3 (IIT) (Note 5) 3/4 (IIT) (Note 6) 3 (BenU) (Note 2) 16/17	Tenth Semester Professional ECE elective ECE 429 or 446 IPRO 497 HUMN 250 Literature/Foreign Language Literature elective Psychology/Sociology elective	3/4 (IIT) (Note 6) 3/4 (IIT) 3 (IIT) (Note 4) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 18/20
		Total	168/172 minimum

- Note 1. Choose Humanities and Social Sciences electives from approved courses.
- Note 2. Choose a Life Sciences course at Benedictine University.
- Note 3. PHYS 211, 212, 205, 206, 213 (BenU) = PHYS 123, 221, 224 (IIT).
- Note 4. Interprofessional projects may be taken at any time during the third, fourth or fifth years (course scheduling must be adjusted accordingly with advisor approval).
- Note 5. CS 470 may be substituted with advisor approval.
- Note 6. Professional electives may be chosen from any of the 400-level IIT ECE courses identified with a (P) in the course description and any 400-level IIT computer science courses except for CS 485. A maximum of three credits of ECE 491 Undergraduate Research or ECE 497 Special Programs may be used as professional electives with advisor approval.
- Note 7. If a 4 credit-hour course is completed, 19 hours will be required for the term. The student must receive permission from their academic dean to complete 19 semester hours in the term.
- Note 8. Consult your academic advisor at Benedictine University regarding the completion of approved courses in a summer term to reduce your academic load in the fall or spring term.
- Note 9. A minimum of 45 semester hours must be completed at IIT.

BenU+IIT (Five-year Biomedical Engineering – Cell and Tissue Track)
B.A. in Engineering Science at Benedictine/
B.S. in Biomedical Engineering – Cell and Tissue Track at IIT

	This recommended	i program or study is an examp	ne only and subject to
First Semester MATH 210 and 207 WRIT 101 PHYS 211 and 205 SPCH 110 ENGR 100	5 (BenU) (MATH 151) 3 (BenU) 5 (BenU) (Note 3) 3 (BenU) 1 (BenU) 17	Second Semester MATH 211 PHYS 212 and 206 WRIT 102 Psychology/Sociology elective ENGR 110	4 (BenU) (MATH 152) 5 (BenU) (Note 3) 3 (BenU) 3 (BenU) (Note 1) 3 (BenU) 18
Third Semester MATH 212 CHEM 113 and 114 CMSC 180 and 185 Religious Studies/ Theology elective Philosophy elective	4 (BenU) (MATH 251) 4 (BenU) (CHEM 124) 4 (BenU) (BME 100) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 18	Fourth Semester MATH 260 CMSC 200 CHEM 123 and 124 HUMN 220 ENGR 264	4 (BenU) (MATH 252) 4 (BenU) (CS115) 4 (BenU) (CHEM 125) 3 (BenU) (Note 1) 3 (BenU) 18
Fifth Semester ECE 215 CHEM 242 and 243 ENGR 220 PHYS 213 HUMN 230 ENGR 120	3 (IIT) 4 (BenU) (CHEM 237) 3 (BenU) (MMAE 200) 3 (BenU) (Note 3) 3 (BenU) (Note 1) 2 (BenU)	Sixth Semester BIOL 115 BIOL 117 BME 200 MS 201 CHEM 247 Anthropology/Political Science elective Literature/Foreign Language Literature elective	3 (IIT) (Note 2) 1 (IIT) (Note 2) 1 (IIT) 3 (IIT) 3 (BenU) (CHEM 239) 3 (BenU) (Note 1) 3 (BenU) (Note 1)
Seventh Semester BME 315 BME 330 CHE 202 ENVE 426 IPRO 497	3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT 3 (IIT	Eighth Semester BME 301 BME 310 BME 320 BME 335	3 (IIT) 3 (IIT) 1 (IIT) 3 (IIT)
Ninth Semester BIOL 430 BME 405 BME 418 BME 419 BME 482 Business/Economics elective	3 (IIT) (Note 2) 2 (IIT) 3 (IIT) 2 (IIT) 3 (IIT) 3 (BenU) (Note 1) 16	BME elective HUMN 240 Tenth Semester BME 420 BME 490 IPRO 497 BME elective HUMN 250 Fine Arts/Music elective	3 (IIT) (Note 4) 3 (BenU) (Note 1) 16 3 (IIT) 1 (IIT) 3 (IIT) 3 (IIT) (Note 4) 3 (BenU) (Note 1) 3 (BenU) (Note 1)
		Total	16 170 minimum

- Note 1. Choose Humanities and Social Sciences electives from approved courses.
- Note 2. BIOL 115, 117, and 430 will substitute for the Life Sciences component of the Benedictine University Natural Science Requirement.
- Note 3. PHYS 211, 212, 213, 205, 206 (BenU) = PHYS 123, 221 (IIT).
- Note 4. BME elective must be a 300+ level engineering course in BME, CAE, CHE, ECE, ENVE or MMAE.
- Note 5. Consult your academic advisor at Benedictine University regarding the completion of approved courses in a summer term to reduce your academic load in the fall or spring term.
- Note 6. A minimum of 45 semester hours must be completed at IIT.

BenU+IIT (Five-year Biomedical Engineering – Medical Imaging) B.A. in Engineering Science at Benedictine/ B.S. in Biomedical Engineering – Medical Imaging at IIT

First Semester MATH 210 and 207 WRIT 101 PHYS 211 and 205 SPCH 110 ENGR 100	5 (BenU) (MATH 151) 3 (BenU) 5 (BenU) (Note 3) 3 (BenU) 1 (BenU) 17	Second Semester MATH 211 PHYS 212 and 206 WRIT 102 Psychology/Sociology elective ENGR 110	4 (BenU) (MATH 152) 5 (BenU) (Note 3) 3 (BenU) 3 (BenU) (Note 1) 3 (BenU) 18
Third Semester MATH 212 CHEM 113 and 114 CMSC 180 and 185 ENGR 120 HUMN 220	4 (BenU) (MATH 251) 4 (BenU) (CHEM 124) 4 (BenU) (BME 100) 2 (BenU) 3 (BenU) (Note 1)	Fourth Semester BIOL 115 BIOL 117 CMSC 200 MATH 260 CHEM 123 and 124	3 (IIT) (Note 2) 1 (IIT) (Note 2) 4 (BenU) (CS 115 and 116) 4 (BenU) (MATH 252) 4 (BenU) (CHEM 125) 16
Fifth Semester ECE 215 MATH 333 ENGR 220 PHYS 213 Religious Studies/ Theology elective Philosophy elective	3 (IIT) 3 (IIT) 3 (BenU) (MMAE 200) 3 (BenU) (Note 3) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 18	Sixth Semester BME 200 ECE 216 ENGR 264 HUMN 230 Anthropology/Political Science elective Literature/Foreign Language Literature elective	1 (IIT) 3 (IIT) 3 (BenU) 3 (BenU) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 16
Seventh Semester BME 309 BME 315 BME 330 ENVE 426 IPRO 497 Business/Economics elective	3 (IIT) 2 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) 17	Eighth Semester BME 310 BME 320 BME 443 BME 445 BME elective HUMN 240	3 (IIT) 1 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) (Note 4) 3 (BenU) (Note 1)
Ninth Semester BIOL 430 BME 405 BME 419 IPRO 497 ECE 437 BME elective	3 (IIT) (Note 2) 2 (IIT) 2 (IIT) 3 (IIT) 3 (IIT) 3 (IIT) (Note 4) 16	Tenth Semester BME 420 BME 438 BME 490 ECE 481 HUMN 250 Fine Arts/Music elective	3 (IIT) 3 (IIT) 1 (IIT) 3 (IIT) 3 (IIT) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 16
		Total	167 minimum

- Note 1. Choose Humanities and Social Sciences electives from approved courses.
- Note 2. BIOL 115, 117 and 430 will substitute for the Life Sciences component of the Benedictine University Natural Science requirement.
- Note 3. PHYS 211, 212, 213, 205, 206 (BenU) = PHYS 123, 211, 224 (IIT).
- Note 4. BME elective must be a 300+ level engineering course in BME, CAE, CHE, ECE, ENVE or MMAE.
- Note 5. Consult your academic advisor at Benedictine University regarding the completion of approved courses in a summer term to reduce your academic load in the fall or spring term.
- Note 6. A minimum of 45 semester hours must be completed at IIT.

BenU+IIT (Five-year Biomedical Engineering – Neural Engineering) B.A. in Engineering Science at Benedictine/ B.S. in Biomedical Engineering - Neural Engineering at IIT

First Semester MATH 210 and 207 WRIT 101 CHEM 113 and 114 SPCH 110 ENGR 120 ENGR 100	5 (BenU) (MATH 151) 3 (BenU) 4 (BenU) (CHEM 124) 3 (BenU) 2 (BenU) 1 (BenU) 18	Second Semester MATH 211 WRIT 102 CHEM 123 and 124 Psychology/Sociology elective ENGR 110	4 (BenU) (MATH 152) 3 (BenU) 4 (BenU) 3 (BenU) (Note 1) 3 (BenU) 17
Third Semester MATH 212 PHYS 211 and 205 CMSC 180 and 185 HUMN 220	4 (BenU) (MATH 251) 5 (BenU) (Note 3) 4 (BenU) (BME 100) 3 (BenU) (Note 1) 16	Fourth Semester BIOL 115 BIOL 117 CS 115 MATH 260 PHYS 212 and 206 Religious Studies/	3 (IIT) (Note 2) 1 (IIT) (Note 2) 2 (IIT) (Note 4) 4 (BenU) (MATH 252) 5 (BenU) (Note 3)
Fifth Semester ECE 211 ECE 218	4 (IIT) 3 (IIT)	Theology elective Sixth Semester	3 (BenU) (Note 1) 18
MATH 333 or CHEM 242 and 243 ENGR 220 PHYS 213	4 (IIT) OR 4 (BenU) (CHEM 237) 3 (BenU) 3 (BenU) (Note 3) 17	BME 200 ECE 213 CHEM 247 or IIT Technical elective ENGR 264	1 (IIT) 4 (IIT) 3 (BenU) (CHEM 239) OR 3 (IIT) 3 (BenU)
Seventh Semester BME 309 BME 315 BME 330 ENVE 426	3 (IIT) 2 (IIT) 3 (IIT) 3 (IIT)	HUMN 230 Anthropology/Political Science elective	3 (BenU) (Note 1) 3 (BenU) (Note 1) 17
IPRO 497 Business/Economics elective	3 (IIT) 3 (BenU) (Note 1) 17	Eighth Semester BME 310 BME 320 BME 443	3 (IIT) 1 (IIT) 3 (IIT)
Ninth Semester BIOL 430 BME 405 BME 419 IPRO 497	3 (IIT) (Note 2) 2 (IIT) 2 (IIT) 3 (IIT)	BME 445 BME elective HUMN 240	3 (IIT) 3 (IIT) (Note 5) 3 (BenU) (Note 1) 16
BME elective Philosophy elective Literature/Foreign Language Literature elective	3 (IIT) (Note 5) 3 (BenU) (Note 1) 3 (BenU) (Note 1) 19	Tenth Semester BME 420 BME 438 BME 490 BME Elective HUMN 250	3 (IIT) 3 (IIT) 1 (IIT) 3 (IIT) (Note 5) 3 (BenU) (Note 1)
Benedictine University recent undergraduate curriculum an in Fall 2014. This recommend	d implementation begins	Fine Arts/Music elective	3 (BenU) (Note 1) 16
example only and subject to		Total	174 minimum

- Note 1. Choose Humanities and Social Sciences electives from approved courses.
- Note 2. BIOL 115, 117 and 430 will substitute for the Life Sciences component of the Benedictine University Natural Science requirement.
- Note 3. PHYS 211, 212, 213, 205, 206 (BenU) = PHYS 123, 221 (IIT).
- If you complete CMSC 200, please consult your academic advisor at Benedictine University regarding the completion of approved Note 4. Humanities in Social Sciences courses in a summer term to reduce your academic load in the fourth semester of the joint program.
- Note 5. BME elective must be a 300+ level engineering course in BME, CAE, CHE, ECE, ENVE or MMAE.
- Consult your academic advisor at Benedictine University regarding the completion of approved courses in a summer term to reduce Note 6 your academic load in the fall or spring term.
- A minimum of 45 semester hours must be completed at IIT.