Student: _____ Advisor: _____

ID: _____ Date: _____

University of St. Thomas
Bachelor of Science in Biochemistry
2012-2014 Catalog

UST Core Requirements (46 hours)	Total Hours Complete	Total Hours Needed
Theology (6 credit hours) – must take in order THEO 1300/3300 – Teachings of the Catholic Church THEO 2300/3310 – Intro to the Sacred Scriptures		
Moral Theology (3 credit hours) – choose one of the following THEO 3349 – Christ and the Moral Life THEO 3351 – Prophets and Ancient Israel THEO 3352 – Paul: His Letters and Theology THEO 4323 – Teachings of Jesus THEO 4325 – Faith and Moral Development THEO 4334 – Social Justice and the Church THEO 4348 – Theology of the Body		
Philosophy (9 credit hours) – must take in order *Systematic Sequence* PHIL 1311 – Phil of the Human Person PHIL 2314 – Ethics PHIL 3313 – Metaphysics **OR** *Historical Sequence* PHIL 1315/3315 – Ancient Philosophy PHIL 2316/3316 – Medieval Philosophy PHIL 3317– Modern Philosophy		
Synthesis Course (3 credit hours) – choose one of the following in consultation with academic advisor CS 3310 – Opening to Transcendence: Rediscovering Symbol CS 3320 – Re-Connecting Catholicism with the Social and Natural Sciences CS 4300 – Catholic Impact on the Professions PHIL 3314 – Business Ethics PHIL 3318 – Bioethics PHIL 3336 – Political Philosophy PHIL 3350 – Contemporary Logic PHIL 4318 – Contemporary Philosophy PHIL 4324 – Faith and Reason PHIL 4331 – Philosophy of Art and Beauty PHIL 4335 – Analytical Philosophy PHIL 4337 – Philosophy of History and Culture PHIL 4340 – Phenomenology and Existentialism PHIL 4350 – Philosophy of Law: Tradition of Natural Law PHIL 4352 – Philosophy of Science PHIL 4354 – Philosophy of Saint Augustine PHIL 4360 – Philosophy of War and Peace PHIL 4362 – Philosophy of Woman PHIL 4364 – Philosophical Themes in Literature PHIL 4366 – Philosophy of Education THEO 3321 – Apologetics THEO 3322 – Theology of Creation THEO 3331 – Catholic Church: Origin, Structure and Mission THEO 3336 – Christian Spirituality THEO 3345 – Theology of St. Thomas Aquinas THEO 3346 – Christian Vocations: Paths to Holiness THEO 3363 – Church History I THEO 3364 – Church History II THEO 3375 – Eastern World Religions THEO 3376 – Western World Religions THEO 4324 – Christian Ethics and the Law THEO 4327 – Sacred Arts in the Church THEO 4334 – Social Justice and the Church THEO 4336 – American Catholic Heritage THEO 4347 – Fathers of the Church THEO 4374 – Modern Challenges to Christianity		
English (9 credit hours) – must take in order ENGL 1341 – The Classical Tradition: Literature & Composition I ENGL 1342 – The Middle Ages: Literature & Composition II ENGL 2312 – The Modern World: Literature & Composition III ***Students with transfer credit:*** *3 hours – take ENGL 1341, 1342* *6 hours – take ENGL 3312*		
History (6 credit hours) HIST 1335 – World Community I HIST 1336 – World Community II **OR** HIST 2333 – United States to 1877 HIST 2334 – United States since 1877 ***Transferring 60+ hours may choose:*** *HIST 3303 – Europe: The Middle Ages* *HIST 3304 – Europe: The Early Modern Age* *OR* *HIST 3331 – Age of Revolutions: Europe 1715-1870* *HIST 3332 – Era of Great Wars: Europe 1870-1950*		
Social & Behavioral Sciences (6 credit hours) • Choose from economics, geography, international studies, political science, psychology and sociology **OR** **Oral Communication (3 credit hours)** **School of Arts & Sciences and School of Education** COMM 1331 – Public Speaking OR COMM 2332 – Persuasion and Argumentation **+** **Social & Behavioral Sciences (3 credit hours)**		
Natural Sciences (8 credit hours) Included in Biochemistry major requirements **OR** **Modern and Classical Languages (6 credit hours)** • Choose two sequential courses in one language. Courses must be completed in the approved order. Choose language options from French, Spanish, (Classical) Greek, Latin, Irish, Arabic, German, Italian, Japanese, Mandarin Chinese, Russian or other available language. **+** **Natural Sciences (4 credit hours)**		
Mathematics (3 credit hours) Included in Biochemistry major requirements		
Fine Arts (3 credit hours) – choose one of the following ARTHS 1350 – Introduction to the Visual Arts ARTHS 2351 – Survey of Art I ARTHS 2352 – Survey of Art II Any upper-division Art History course DRAM 1330 – Introduction to the Theatre DRAM 3329 – Screenwriting DRAM 3331 – Playwriting DRAM 3340 – Theatre History I DRAM 3341 – Theatre History II MUSC 1331 – Introduction to Music MUSC 2363 – Basic Musicianship I MUSC 2463 – Basic Musicianship I for Music Majors Upper-division Music course		
Freshman Symposium (1 credit hour) – required for all entering freshmen UNIV 1111 – Freshman Symposium: Educating Leaders of Faith and Character		

Transfer Students:

Transferring 30-59 hours:
Theology – 6-9 hours
Philosophy – 6-9 hours
Synthesis – 3 hours
Total must be 18 hours

Transferring 60+ hours:
Theology – 6 hours
Philosophy – 6 hours
as upper or lower division

Bachelor of Science in Biochemistry Major Requirements (77-78 credit hours)	Total Hours Complete	Total Hours Needed
Chemistry (40 credit hours): CHEM 1341/1141 – General Chemistry I and laboratory CHEM 1342/1142 – General Chemistry II and laboratory *(pre-req CHEM 1341/1141)* CHEM 2343/2143 – Organic Chemistry I and laboratory *(pre-req CHEM 1342/1142)* CHEM 2344/2144 – Organic Chemistry II and laboratory *(pre-req CHEM 2343/2143)* CHEM 3334/3134 – Biochemistry and laboratory *(pre-req junior standing; CHEM 2343/2143)* CHEM 3343/3143 – Quantitative Analysis and laboratory *(pre-req CHEM 1341/1342)* CHEM 4112 – Seminar (pass/fail) CHEM 4150 – Laboratory Research Methods (pass/fail) CHEM 4332/4132 – Inorganic Chemistry and laboratory *(pre-req CHEM 2344/2144)* CHEM 4334 – Advanced Biochemistry *(pre-req CHEM/BIOL 3334; BIOL 3351)* CHEM 4361/4161 – Physical Chemistry I and laboratory CHEM 4362 – Physical Chemistry II *(pre-req CHEM 4361)*		
Chemistry – Choose one of the following (4 credit hours): CHEM 3344/3144 – Instrumental Methods of Analysis and laboratory *(pre-req CHEM 3343)* CHEM 4331/4131 – Advanced Organic Chemistry and laboratory *(pre-req CHEM 2344/2144)*		
Biology (14 credit hours): BIOL 1351 – Introduction to Population Biology and Evolution *(co-req BIOL 1151)* BIOL 1151 – Introduction to Biology Practicum *(co-req BIOL 1351)* BIOL 1352 – Introduction to Cell and Molecular Biology *(co-req BIOL 1152)* BIOL 1152 – Basic Lab Techniques in Biology *(co-req BIOL 1352)* BIOL 3321 – Genetics *(pre-req BIOL 1351/1151/1352/1152; CHEM 1341/1141/1342/1142)* BIOL 3351 – Molecular Biology *(pre-req BIOL 3321; CHEM 2343)*		
Biology – Choose one of the following (3-4 credit hours): BIOL 3345 – Physiology *(pre-req BIOL 3321)* BIOL 3461 – Cell Biology with laboratory *(pre-req BIOL 3321)*		
Mathematics (8 credit hours): MATH 1431 – Calculus I MATH 1432 – Calculus II *(pre-req MATH 1431)*		
Physics (8 credit hours): PHYS 2333/2111 – University Physics I and lab OR PHYS 1331/1111 – General Physics I and lab PHYS 2334/2112 – University Physics II and lab PHYS 1332/1112 – General Physics II and lab		

IT IS HIGHLY RECOMMENDED THAT B.S. MAJORS TAKE UNIVERSITY PHYSICS INSTEAD OF GENERAL PHYSICS

Electives to reach the 126 credit hour minimum for graduation (2-3 credit hours)		
Total Required	**126**	

(_____ hours transferred)

_____hrs complete +_____ hrs ip + _____hrs core + _____hrs major + _____ hrs minor + _____ hrs other + _____hrs electives = 126+