

Biochemistry Prerequisites for Schulich Dentistry

2021-2022 Application Cycle

Dentistry requires all incoming students to have a thorough knowledge of basic biochemical principles and concepts which must include:

- protein structure
- protein function including enzymology
- interconnectedness and regulation of the central pathways of energy metabolism
- DNA replication and repair
- transcription
- translation
- basic molecular biology techniques

To satisfy the biochemistry prerequisite requirement, all applicants must successfully complete an approved half-year course (3 credit hours) by April 30th of the application cycle in which they apply and earn a pass or credit designation. In some cases more than a half-year of approved courses may be required to cover all the biochemistry content our Doctor of Dental Surgery program requires. If more than once course is listed, then a pass or credit designation must be attained in **each course** listed in the combination.

Since individual universities may alter their course offerings or the content of a course, this list is subject to change without notice. **If your home university does not offer a listed course, please review the list as there are other universities that have approved distance education courses.**

The absence of a course from this list does not necessarily imply that it is deficient or inadequate. If your university offers a biochemistry course, or course combination, covering the above mentioned subject areas in detail, please email the Admissions Office to request a review by Western University. You must indicate in your email an explanation of what course or course combinations you wish to have considered and must attach a **detailed course syllabus that includes course content, textbook and grading information for each course mentioned**. In cases where the request to review includes a course that is not on the approved list to be considered with a course at that institution that is on the approved list you must still submit the syllabus of the already approved course. Please note:

- There may be courses listed that are not offered but they remain on the list as they are approved courses as long as they are not more than 10 years old. If there is a continued course that still appears on this list that is more than 10 years old, please email the Admissions Office with the relevant information so we can update the list.
- Course reviews for future applicants take place between April and August. Only applicants who have applied in the current application cycle have course reviews completed between September and March.

**ACCEPTABLE BIOCHEMISTRY PREREQUISITES
FOR THE SCHULICH DENTAL PROGRAM**

| INSTITUTION | APPROVED COURSES/COURSE COMBINATIONS |
|---|--|
| <p>All courses with a (+) must all be taken to cover in detail the content required by our program</p> <p>This list is reviewed and updated as new information becomes available. Courses listed as acceptable during this application cycle may not be acceptable in future application cycles. If you have any concerns about acceptability of courses, please see instructions above regarding review of prerequisite courses.</p> | |
| Acadia University | CHEM 2713 |
| University of Alberta | BIOCH 200 BIOCH 203 + BIOCH 205 BIOCH 220 + Genetics 304 |
| University of Alberta – Augustana Campus | CHE 280 BIO 280 AUBIO 380 |
| Algoma University | CHMI 3016 + CHMI 3017 |
| Ambrose University | BCH 297 + 397 |
| Athabasca University | CHEM 301 |
| Bishop's University | BIOC 211A BIO 215 + BIO 360 BIO 215 + BIO 315 BIO 196 + BCH 210 + BCH 313 |
| University of British Columbia | BIOL 201 BIOL 311 + BIOL 319 BIOC 302 BIOC 303 BIOC 202 + BIOC 302 BIOC 300 |
| University of British Columbia - Okanagan | BIOC 304 + BIOC 305 |

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| Brock University | BIOL 2F01 BIOL 2P01 + BCHM 3P02 BCHM 3P01 + BCHM 3P02 BIOL 2P02 + HLSC 2P09 BIOL 2P02 + BCHM 3P01 |
| University of Calgary | BIOCHEM 341 BIOCHEM 393 |
| Cape Breton University | CHEM 261 (2601) CHEM 365 |
| Carleton University | BIOL 2201 + BIOC 2300 BIOL 2200 + BIOC 2300 BIOL 2200 + BIOC 3101 BIOL 2200 + CHEM 3401 BIOC 2200 + BIOC 2300 BIOC 2200 + BIOC 3101 BIOC 2200 + CHEM 3401 BIOL 2104 + BIOC 2200 (BIOL 2200) + BIOC 3201 BIOL 2104 + BIOL 2200 (BIOC 2200) BIOC 3101 + BIOC 3102 BIOCHEM 63.310 BIOL 61.103 + BIOCHEM 63.220 |
| Concordia University | CHEM 271 BIOC 2300 |
| Concordia University of Edmonton | BIOCH 200 + BIOCH 340 |
| Dalhousie University | BIOC 1040 BIOC 1420 BIOC 2010 BIOC 2200 BIOC 2300 MICI 2100 BIOC 2300 + BIOL 2030 |
| University of the Fraser Valley | BIO 201 + BIO 202 BIO 320 |

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| University of Guelph | BIOC 2580 |
| University of Guelph-Humber | KIN 2070 + SCMA 1120 |
| The King's University | CHEM 400 + CHEM 401 BIOL 470 + BIOL 471 BIOL 322 + CHEM 400 BIOL 422 + CHEM 400 |
| Lakehead University | CHEM 3251 BIOL 3252 |
| Laurentian University | CHMI 2227E + CHMI 3226 |
| University of Lethbridge | BIOC 3010 + BIOC 3020 CHEM 3310 + CHEM 3320 BCHM 2000 |
| Grant MacEwan University | BICM 200 |
| University of Manitoba | CHEM/MBIO 2360 CHEM/MBIO 2370 BIOCHEM 277 + BIOCHEM 278 BIOCHEM 060.235(F) BIOCHEM 002.235(F) |
| McGill University | BIOL 200 + BIOL 201 BIOL 200 + ANAT 212 BIOL 200 + BIOC 212 BIOC 212 + BIOL 300 MOL BIOL 200 FDSC 211 + ANSC 234 LSCI 211 + ANSC 234 177-200A NUR1 200 Any 2 of these courses: 177-201B / 507-212B / 507-311A / 507-312B |

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| McMaster University | HTH SCI 2E03 + HTH SCI 3SB3 HTH SCI 1A06 HTH SCI 1AA3 + HTH SCI 1BB3 HTH SCI 2E03 + BIOCHEM 3G03 HTH SCI 2E03 + BIOCHEM 3H03 HTH SCI 2E03 + BIOCHEM 3D03 ISCI 2A18 + BIOCHEM 3D03 BCHM 2L06 + ISCI 2A18 BIOL 1A03 BIOCHEM 2A06 BIOCHEM 3G06 BIOCHEM 2EE3 + BIOCHEM 3G03 BIOCHEM 2EE3 + BIOCHEM 3H03 BIOCHEM 2EE3 + BIOCHEM 3N03 BIOCHEM 2EE3 + HTH SCI 2E03 BIOCHEM 2EE3 + HTH SCI 2D06 BIOCHEM 2EE3 + HTH SCI 1AA3 Any 2 of these courses: BIOCHEM 2EE3 / BIOCHEM 2B03 / BIOCHEM 2BB3 |
| Memorial University | BIOC 2101 (BIOC 2201) + BIOC 2100 (BIOC 2200) BIOC 2101 (BIOC 2201) + BIOC 2250 |
| University of Moncton | BICH 2023 + BICH 2623 BICH 2023 + BICH 3843 |
| University of Montreal | PHM 1140 BCM 1531 |
| Mount Allison University | BIOC 2001 |
| Mount Royal College | BCEM 3341 BCEM 2201 + BCEM 3202 |
| Mount St. Vincent University | CHEM 3501 |

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| University of New Brunswick, Fredericton | BIOL 2023 BIOL 2033 |
| University of New Brunswick, St. John | BIOL 2065 + BIOL 2245 BIOL 2065 + BIOL 3132 |
| Niagara University | CHE 345 + CHE 346 |
| Nipissing University | BIOL 2206 + BIOL 3306 |
| University of Northern BC | CHEM 204 BCMB 306 + BIOL 311 |
| Okanagan University College | BIOL 221 BIOL 311 |
| University of Ontario Institute of Technology (UOIT) | BIOL 2020U + BIOL 4070U BIOL 2080 BIOL 2020U + BIOL 2040U + BIOL 3010U HLSC 2110U |
| University of Ottawa | BCH 1100 BCH 1500 BCH 2140 BCH 2540 BCH 2333 BCH 2733 HSS 2305 |
| University of Prince Edward Island | CHEM 351 CHEM 352 CHEM 353 |
| Queen's University | BIOL 205 + BIOL 234 BIOL 205 + BIOL 334 CHEM 323 BCHM 310 BCHM 315 + BIOL 205 BCHM 315 + BIOL 218 BCHM 315 + BCHM 316 BCHM 315 + MBIO 218 BCHM 315 + MBIO 318 BCHM 315 + BCHM 218 BCHM 218 + BIOL 334 BCHM 218 + BCHM 270 BCHM 270 + BIOL 205 |

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| Red Deer College | BIOC 302 + BIOC 304 BIOC 302 + BIOC 305 BIOC 302 + BIOC 393 BIOC 303 + BIOC 304 BIOC 303 + BIOC 305 BIOC 303 + BIOC 393 |
| University of Regina | BIOC 220 |
| Royal Military College | CCE 385B + CCE 460A |
| Ryerson University | CHY 204 + CHY 205 CHY 204 + CHY 261 CHY 204 + BCH 261 CHY 204 + CHY 362 CHY 205 + CHY 261 CHY 205 + BCH 261 CHY 205 + CHY 362 CHY 205 + CKCH 225 CHY 261 + CHY 361 BCH 261 + CHY 361 BCH 361 + BCH 463 |
| St. Francis Xavier University | CHEM 255 |
| St. Mary's University | CHEM 451 CHEM 4452 CHEM 3451 |
| University of Saskatchewan | BIOC 200.3 BMSC 200.3 |
| Simon Fraser University | BICH 222 + BICH 221 MBB 201 + MBB 222 MBB 201 + MBB 231 MBB 201 + MBB 321 MBB 222 + MBB 242 MBB 222 + MBB 321 |

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| Thompson Rivers University (University College of the Cariboo) | BIOL 313 BIOL 323 BIOL 3131 + BIOL 3231 |
| University of Toronto | BIO 206 + BIO 215 BIO 206 + BIO 315 BIO 206 + BIO 361 BIO 206 + CHM 362 BIO 206 + NFS 386 BIO 207 + BIO 215 BIO 240 + BIO 241 BIO 250Y BCH 242Y BCH 310H BCH 320Y BCH 321Y BCH 1422 BCH 210 + BIO 130 BCH 210 + BIO 230 BCH 210 + BIO 255 BCH 210 + PMU 199 BCH 210 + BCH 311 BCH 210 + BME 205H + BME 396H BCH 210 + BIO 206H CHM 261 CHM 360Y CHM 361 PHM 225 + PHM 226 |
| University of Toronto - Scarborough | CHMB 62H3 BIOC 12 + BIOC 13 BIOC 12 + BIOB 10Y (BIOB 10H3 + BIOB 11H3) BIOC 12 + BGYB 11 BIOC 13 + BIOB 10Y (BIOB 10H3 + BIOB 11H3) BIOC 13 + BGYB 11 BGYB10 + BGYC12 (BIOC 12) BGYB11 + BGYC13 (BIOC 13) |

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| University of Toronto - School of Continuing Studies | SCS 2472 (Continuing Studies) |
| Trent University | BIOL 206H + CHEM 231H BIOL 2300 + BIOL 3310 BIOL 2300 + CHEM 3310 BIOL 3080 + CHEM 2300 BIOL 3080 + BIOL 2300 CHEM 3300 CHEM 2300 + BIOL 3310 CHEM 2300 + CHEM 3310 |
| Trinity Western University | BIOL 384 CHEM 384 |
| Vancouver Island University | BIOL 201 |
| University of Victoria | BIOC 200 BIOC 300 (A + B) BIOC 300A + BIOC 102 |
| University of Waterloo | CHEM 233 CHEM 237 (NE224) NE 224 KIN 217 |
| Western University | BIOCHEM 2280A (280A) (also offered as Distance Studies) BIOCHEM 2288A CBE 2290A/B CHEM 4493A/B |
| Wilfrid Laurier University | CH 250 + CH 350 CH 330 + CH 331 CH 350 + BI 226 + BI 236 |
| University of Windsor | CHEM 261 (BIOC 2010) CHEM 263 + CHEM 265 CHEM 362/363 + CHEM 365 (BIOC 3130) CHEM 362/363 + CHEM 360/361 |
| University of Winnipeg | CHEM-3502 + CHEM-3503 |
| York University | CHEM 2050 SC/BIOL 2020 BCHM 2020 |