# Degree Plan of Study for Bachelor of Science in Actuarial Sciences
## Catalog Requirements for 2018/2019 Academic Year (Expires summer 2025)

Name _____ Student ID # **G00** __ __ __ __ __ __  Date _____

| The B.S. in Actuarial Science degree is conferred by the College of Arts & Sciences (CAS). Students should meet with advisers in the SBA and in the CAS to ensure they will meet all degree requirements. CAS Academic Advising is located in 130 O'Dowd Hall, 248-370-4567. |
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Students must earn a 2.0 or better in each of the checked (✓) courses.

| | | | | Course | Grade | Transfer | Need |
|---|---|---|---|---|---|---|---|
| **FOUNDATION KNOWLEDGE AREAS** | ✓ | WRT 1050  Composition I (if necessary) - (4) | | | | | |
| | ✓ | WRT 1060  Composition II (4) | | | | | |
| **EXPLORATIONS KNOWLEDGE AREAS** | | Arts | Choose one course to satisfy each of the requirements for the Knowledge Areas from the approved lists found in the General Education section of the 2018/2019 Undergraduate Catalog. (40 credits minimum) | | | | |
| | | Foreign Language & Culture | | | | | |
| | | Global Perspective (ECN 2020 can fulfill) | | | | | |
| | | Literature | | | | | |
| | | Natural Science & Technology | | | | | |
| | | Western Civilization | | | | | |
| **DIVERSITY** | | U.S. Diversity Course- *Use a course from Explorations Knowledge Areas* | | | | | |

All other OU General Education areas are satisfied by courses you will complete throughout the business program. If you have transfer credits, confirm with an adviser that they are applicable.

ECN 2020 at Oakland University satisfies the Global Perspective requirement. ECN 2000 as a transfer course does not satisfy Global Perspective.

| | | | | Course | Grade | Transfer | Need |
|---|---|---|---|---|---|---|---|
| **MATHEMATICS & STATISTICS REQUIREMENTS**<br><br>SBC 1990 ☐<br><br>SBC 2990 ☐ | ✓ | MTH 0661 and/or MTH 0662 (if necessary) | | | | | |
| | ✓ | MTH 1441  Pre-calculus (if necessary) – (4) | | | | | |
| | ✓ | MTH 1554  Calculus I – (4) | | | | | |
| | ✓ | MTH 1555  Calculus II – (4) | | | | | |
| | ✓ | MTH 2554  Multivariable Calculus - (4) | | | | | |
| | ✓ | *ACS 3000  Foundations of Probability and Calculus - (1) | | | | | |
| | ✓ | MTH 2775  Linear Algebra - (4) | | | | | |
| | ✓ | STA 2226  Applied Probability and Statistics - (4) | | | | | |
| | ✓ | STA 4227 Introduction to Mathematical Statistics I - (4) | | | | | |
| | ✓ | QMM 2410 Stat. Meth. for Bus II- (3) or STA 4330 (4) Or STA 4228 | | | | | |
| | ✓ | Choose one: APM 2555 Or APM 2559 | | | | | |
| **ECONOMICS REQUIREMENTS**<br><br>ACS 3990 ☐ | ✓ | ECN 2020  Global Macroeconomics – (4) Or ECN 2000  Macroeconomics– (4) | or ECN 2100 6 crs. | | | | |
| | ✓ | ECN 2010  Microeconomics – (4) | | | | | |
| | ✓ | ECN 3210 Fin. Mrkts & Economy (3), Or ECN 3020 Intermed. Macro. (3) | | | | | |
| | ✓ | ECN 3810 Mathematical Anal./Economists (3), Or ECN 3030 Mgrl. Econ. (3) | | | | | |
| | ✓ | ECN 4050 Econometrics- (3)  Or STA 4002 Applied Linear Models I - (4) | | | | | |
| | ✓ | ACS 4550  Financial Mathematics- (3) | | | | | |
| **FINANCE REQUIREMENTS** | ✓ | FIN 3550 Finance for AS (4) Or FIN 3220 Managerial Finance I (4) | | | | | |
| | ✓ | FIN 3600 Investment Analysis – (3) Or FIN 4250 Fin. Derivatives- (3) | | | | | |
| | ✓ | FIN 3720  Managerial Finance II – (3) – if FIN 3220 is taken | | | | | |
| **COGNATES** | ✓ | ACC 2000  Introductory Financial Accounting – (4) | | | | | |
| | ✓ | EGR 1400  Computer Problem Solving in Engr. & Comp. Sci. – (4) | | | | | |
| | ✓ | WRT 3082  Business Writing – (4) | | | | | |
| | ✓ | MIS 3130 Info. & Data Mgt. (3) Or MIS 3140 Bus. Data. Systems - (3) | | | | | |
| | ✓ | MIS 4460 Business Analytics - (3) | | | | | |
| **College Exploratory 12 Credits** See College Exploratory Requirement in 2017/18 Undergraduate Catalog. | | | | | | | |
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**\*** **ACS 3000 is not required for students who earn at least a 3.5 grade in MTH 2554**          **124 credits – minimum required for degree**

**Doing Well in Calculus is Extremely Important**

**Sample Student Schedule – March 2018**   *Starting with MTH 1441/1554*
**Actuarial Science Major with a Minor^ in Mathematics**

First course listed is preferred course to take

| **Semester 1** | **Credits** | **Semester 2** | **Credits** |
|---|---|---|---|
| MTH 1441Pre- Calculus OR MTH 1554* Calculus I | 4 | MTH 1554*Calculus I Or MTH 1555 Calculus II | 4 |
| WRT 1050 Comp I Or WRT 1060# Comp II | 4 | WRT 1060# Comp II Or EGR 1400 Comp Prob Sol | 4 |
| ECN 2010* Principles of Microeconomics Or ECN2020* Principles of Global Macroeconomics | 4 | ECN 2020*,[10] Principles of Global Macroeconomics Or ECN 3210[A],[3] MB, Fin Mkt | 4 |
| ACC 2000 Financial Accounting Or General Education$$$ | 4 | ACC 2000 Financial Accounting Or ACC 2100[2],[9] Managerial Accounting | 4 |
| SBC 1990 Achieve I | 0 | SBC 2990 Achieve II | 0 |
| | **16** | | **16** |

| | **Credits** |
|---|---|
| **Summer**-ACC 2100[2],[9] Managerial Accounting needed if taking FIN 3220 in fall | 4 |

| **Semester 3** | **Credits** | **Semester 4[A]  Light load to study for FM exam** | **Credits** |
|---|---|---|---|
| MTH 1555 Calculus II Or MTH 2554 Calculus III | 4 | MTH 2554 Calculus III Or MTH 2775 Linear Algebra | 4 |
| FIN 3550[1] Finance for ACS Or FIN 3220[2] Managerial Finance | 4 | FIN 3720[2] Man Finance 2 (FW) Or ACC 3010[9] Fin Rep (FW) | 3 |
| ACC 3010[2],[9] Fin Rep (FW) Or ACC 2100[9] Managerial Accounting | 3 or 4 | | |
| ECN 3810[11] Math Econ Or ECN 3030 Mgrl Econ | 3 | ECN 3210[A],[3] MB and Financial Mkts (WS) | 3 |
| STA 2226 Applied Probability and Statistics | 4 | ACS 4550[A],$$ Financial Math I (W) | 3 |
| ACS 3990 Achieve III (FW) | 0 | *Start studying for FM exam March 1[a]* | **13** |
| | **18 or 19** | | |

| **Semester 5[B]  Light load to study for P exam** | **Credits** | **Semester 6** | **Credits** |
|---|---|---|---|
| STA 4227[B]  Intro to Mathematical Statistics I (F) | 4 | APM 2555[6] DifyQ-Matrix Alg Or WRT 3082* Business Writing | 4 |
| ACS 3000[4] Found. of Probability and Calculus (F) | 1 | *STA 4228[8]  Mathematical Statistics II (W)* Or QMM 2410[8] Stat Meth for Bus II | 4 or 3 |
| MTH 2775 Lin Algeb/APM 2557[6] Dif Equ (F) | 4 | | |
| MIS 4460[D] Business Analytics (FW) | 3 | EGR 1400 Computer Problem Solving | 4 |
| *Start studying for P exam Nov 1[b]* | **12** | MIS 3130[5] Information & Data Management (W) | 3 |
| | | | **14 - 15** |

| | **Credits** |
|---|---|
| **Summer** - WRT 3082* Bus Writing | 4 |

| **Semester 7** | **Credits** | **Semester 8** | **Credits** |
|---|---|---|---|
| General Education$$$ | 4 | Free elective&,^ | 3 or 4 |
| General Education$$$ | 4 | Free elective&,^ | 3 or 4 |
| *ACS 4660[7],[E] Adv Financial Derivitives (F)* Or General Education$$$ | 3 or 4 | *FIN 4250[7] Financial Derivatives (W)* Or General Education$$$ | 3 or 4 |
| ECN 4050$,[C],[D] Econometrics (F) Or STA 4002$,[C],[D]  Applied Linear Models I (F) | 3 or 4 | General Education$$$ | 4 |
| Free elective&,^ | 3 or 4 | FIN 3600[9] Investments | 3 |
| | **17 - 20** | | **16 - 19** |

**Total Credits (124 required)**

**Doing Well in Calculus is Extremely Important**

**Sample Student Schedule – March 2018   _Starting with MTH 1555/2554_**
**Actuarial Science Major with a Minor^ in Mathematics**
First course listed is preferred course to take

| **Semester 1** | **Credits** | **Semester 2** | **Credits** |
|---|---|---|---|
| MTH 1555 Calculus II Or MTH 2554 Calculus III | 4 | MTH 2554 Calc III Or MTH 2775  Linear Algebra | 4 |
| WRT 1050 Comp I Or WRT 1060[#] Comp II | 4 | WRT 1060[#] Comp II Or EGR 1400 Computer Problem Solving | 4 |
| ECN 2010[*] Prin Microeconomics    Or ECN 2020[*] Prin Global Macroeconomics | 4 | ECN 2020[*,10] Prin Global Macroeconomics     Or ECN 3210[A,3] MB and Fin Mkt and Economy | 4 |
| ACC 2000 Int Fin Acc or STA 2226 Apl Stat Prob | 4 | STA 2226 Applied Probability and Statistics     Or ACC 2100[2,9] Managerial and Cost Accounting | 4 |
| SBC 1990 Achieve I | 0 | SBC 2990 Achieve II | 0 |
|  | **16** |  | **16** |

**Summer**-ACC 2100[2,9] Man Acc needed if taking FIN 3220 in fall   **4**

| **Semester 3   Light load to study for P exam** | | **Semester 4[A]   Light load to study for FM exam** | |
|---|---|---|---|
| STA 4227[B]  Mathematical Statistics I (F) | 4 | ACS 4550[A,$$] Financial Math I (W) | 3 |
| ACS 3000[4] Found. of Probability and Calculus (F) | 1 | ECN 3210[A,3] MB and Financial Mkts (WS) | 3 |
| MTH 2775 Linear Algebra    or ECN 3810[11] Mathematical Analysis for Econ | 4 or 3 | ACC 2100[9] Managerial and Cost Accounting     Or ACC 3010[9] Fin Reporting and Analysis (FW) | 4 or 3 |
| FIN 3550[1] Fin for ACS | 4 | _STA 4228[8]  Intro to Mathematical  Statistics II (W)_ | 4 or 3 |
| ACS 3990 Achieve III (FW) | 0 |     Or QMM 2410[8] Statistical Methods for Bus II | |
| _Start studying for P exam Nov 1[a]_ | **12 or 13** | _Start studying  for FM exam March 1[b]_ | **12 or 14** |

| **Semester 5[B]** | | **Semester 6** | |
|---|---|---|---|
| ECN 3810[11] Mathematical Analysis for Economists    Or ACC 3010[2,9] Financial Reporting and Anal (FW) | 3 | WRT 3082[*] Business Writing Or Free elective[&,^] | 3 or 4 |
| APM 2557[6] Dif Equ (F) | 4 | Free elective[&,^] | 3 or 4 |
| MIS 4460[D] Business Analytics (FW) | 3 | Free elective[&,^] | 3 or 4 |
| ECN 4050[$,C,D] Econometrics (F) |  | EGR 1400 Computer Problem Solving | 4 |
|    Or STA 4002[$,C,D]  Applied Linear Models I (F) | 3 or 4 | MIS 3130[5] Information & Data Mgt (W) | 3 |
| WRT 3082[*] Bus Writing OR Free elective[&,^] | 3 or 4 |  | **16 or 19** |
|  | **16 or 18** |  | |

| **Semester 7** | | **Semester 8** | |
|---|---|---|---|
| General Education[$$$] | 4 | General Education[$$$] | 4 |
| General Education[$$$] | 4 | Free elective[&,^] | 3 or 4 |
| _ACS 4560[7,E] Adv Financial Derivitives (F)_ |  | _FIN 4250[7] Financial Derivatives (W)_ |  |
|    Or FIN 3600[9] Investments | 3 |    Or Free elective[&,^] | 3 or 4 |
| General Education[$$$] Or FIN 3600[9] Investments | 3 or 4 | General Education[$$$] | 4 |
|  | **14 or 15** | FIN 3600[9] Investments/General Education[$$$] | 3 or 4 |
|  |  |  | **17 or 20** |

**Total Credits (124 required)**