

## Course Outline

### 1. COURSE INFORMATION

|  |  |  |               |
|--|--|--|---------------|
| <b>Session Offered</b>                 | Winter 2022  |  |               |
| <b>Course Name</b>                     | Operations Management  |  |               |
| <b>Course Code</b>                     | GENTECH 40M3   |  |               |
| <b>Date(s) and Time(s) of lectures</b> | C01  | Monday   | 08:30 - 10:20 |
|  | C01  | Thursday   | 13:30 - 14:20 |
|  | C02  | Tuesday  | 13:30 - 14:20 |
|  | C02  | Friday   | 11:30 - 13:20 |
|  | C03  | Tuesday  | 16:30 - 18:20 |
|  | C03  | Thursday   | 11:30 - 12:20 |
| <b>Lectures Zoom Link</b>              | <a href="https://mcmaster.zoom.us/j/98010900935?pwd=d0dxSGNxYmk1bW4xWXg0ajU4eE9BQT09">https://mcmaster.zoom.us/j/98010900935?pwd=d0dxSGNxYmk1bW4xWXg0ajU4eE9BQT09</a>  |  |               |
| <b>Program Name</b>                    | One of the following: Automotive and Vehicle Engineering Technology/ Biotechnology/ Automation Engineering Technology  |  |               |
| <b>Calendar Description</b>            | This course addresses the management of operations at the strategic, tactical and operations levels. Emphasizing decisions required to successfully design, create and deliver goods and services in a globalized marketplace. |  |               |
| <b>Instructor(s)</b>                   | Alyaa Abdelhalim   | E-Mail: <a href="mailto:abdela21@mcmaster.ca">abdela21@mcmaster.ca</a><br>Office Hours & Location: TBA |               |
|  | Julee Minniti  | E-Mail: <a href="mailto:minniti@mcmaster.ca">minniti@mcmaster.ca</a><br>Office Hours & Location: TBA   |               |
| <b>TAs</b>                             | Daniel Hilal   | E-Mail: <a href="mailto:hilald@mcmaster.ca">hilald@mcmaster.ca</a><br>Office Hours & Location: TBA     |               |
|  | Romanch Shah   | E-Mail: <a href="mailto:shahr60@mcmaster.ca">shahr60@mcmaster.ca</a><br>Office Hours & Location: TBA   |               |

### 2. COURSE SPECIFICS

|                           |  |                                     |  |
|---------------------------|--|-------------------------------------|--|
| <b>Course Description</b> | Operations Management is the profession that designs, plans and operates production (and service) systems to achieve the goals of the organization. Topics in this course are aligned to ten strategic decisions required for the effective management of the operations function and include productivity, forecasting, supply chain management, inventory, resource planning, process design and more. |                                     |  |
| <b>Instruction Type</b>   | <b>Code</b>  | <b>Type</b>                         | <b>Hours per term</b>                                  |
|                           | C  | Classroom instruction               | 39   |
|                           | DE   | Distance education                  |  |
|                           | <b>Total Hours</b>   |                                     | 39   |
| <b>Resources</b>          | <b>ISBN</b>  | <b>Textbook Title &amp; Edition</b> | <b>Author &amp; Publisher</b>                          |
|                           | 126032687X · 9781260326871   | Operations Management               | William J Stevenson, Hydeh Mottaghi, Behrouz Bakhtiari |
|                           | <b>Other Supplies</b>  | <b>Source</b>                       |  |

|                                 |   |   |
|---------------------------------|---|---|
|                                 |   | Casio calculator {McMaster approved model}<br>Microsoft Excel®<br>Software Package: TBA |
| <b>Prerequisite(s)</b>          | GENTECH 3LS3 and registration in Level III or above of Automation Engineering Technology, Automotive and Vehicle Engineering Technology, or Biotechnology   |   |
| <b>Corequisite(s)</b>           | NA  |   |
| <b>Antirequisite(s)</b>         | NA  |   |
| <b>Course Specific Policies</b> | <p>It is recommended that students actively participate during class sessions offering insight, comment, reinforcement, argument, contrary views and underscoring examples (if applicable).</p> <p><b>Course Communications:</b></p> <ul style="list-style-type: none"> <li>• It is your responsibility to check Avenue daily – everything you will need is there and any important announcements will be posted there. Set your home page to the news feed for the course. See the Course A2L Website for any updates.</li> <li>• We only respond to emails from students' McMaster email accounts. Ensure that your Mac account is activated and has space to receive emails. We reply to emails only once, and if it returns to us as "undeliverable mail" we do not attempt any further replies. We do not respond to emails asking questions to which the answer is readily available in the course outline or Avenue.</li> </ul> <p><b>Assignments:</b></p> <p>Variable formats, informed by current issues, and engaging activities. Designed to extend course content beyond lecture and readings and will be assigned according to topic coverage in the Timetable. There will be no make-up/deferred assignments. Late assignments will receive an immediate 10% deduction from the assignment mark up to 24 hours past due. Assignments that have not been submitted within 24 hours after the due date will not be graded and will receive a mark of <u>ZERO</u>.</p> <p><b>Quizzes:</b></p> <p>The on-line module quizzes (Avenue to Learn) will consist of multiple-choice, True or False and written response questions designed to ensure that you are keeping up with your course reading. Highly recommended you study the chapter material in-depth before completing the online quiz. The lowest quiz grade will be dropped automatically. NOTE: If an MSAF is submitted for a quiz, that quiz is considered as the dropped quiz. There will be no make-up/deferred quizzes. Any collaboration, posting or sharing of online quiz questions or answers with other students will constitute academic dishonesty.</p> <p><b>Midterm Exam:</b></p> <p>Online - restrictions and requirements are included when midterm announcement is made. Format TBD. Please note that there are no deferred mid-term examinations in this course. If, for any reason a student misses a mid-term examination, the value of that examination will be applied to the cumulative final examination (i.e. a missed midterm exam will result in the cumulative final examination being weighted at 55% of the final grade).</p> <p><b>Final Exam:</b></p> |   |

|   |  |   |        |                         |
|---|--|---|--------|-------------------------|
|   | The cumulative final exam will be written during the scheduled examination period. Format TBD.<br>It is the student's responsibility to check/verify Avenue in a timely fashion that all grades for assignments and in-class activities are logged. No adjustments for missing marks will be considered after the last day of class. |   |        |                         |
| Departmental Policies   | Students must maintain a GPA of 3.5/12 to continue in the program.   |   |        |                         |
|   | In order to achieve the required learning objectives, on average, B.Tech. students can expect to do at least 3 hours of "out-of-class" work for every scheduled hour in class. "Out-of-class" work includes reading, research, assignments and preparation for tests and examinations.   |   |        |                         |
|   | Where group work is indicated in the course outline, such collaborative work is mandatory.   |   |        |                         |
|   | The use of cell phones, iPods, laptops and other personal electronic devices are prohibited from the classroom during the class time, unless the instructor makes an explicit exception.   |   |        |                         |
|   | Announcements made in class or placed on Avenue are considered to have been communicated to all students including those individuals that are not in class.  |   |        |                         |
| Instructor has the right to submit work to software to identify plagiarism.   |  |   |        |                         |
| 3. SUB TOPIC(S)   |  |   |        |                         |
| Week 1  | January 10 <sup>th</sup>   | Chapter 1: Introduction to Operations Management              | Quiz 1 |                         |
| Week 2  | January 17 <sup>th</sup>   | Chapter 3: Demand Forecasting                                 | Quiz 2 |                         |
| Week 3  | January 24 <sup>th</sup>   | Chapter 5: Strategic Capacity Planning                        | Quiz 3 | Assignment 1            |
| Week 4  | January 31 <sup>st</sup>   | Chapter 6: Process Design & Facility Layout                   | Quiz 4 |                         |
| Week 5  | February 7 <sup>th</sup>   | Chapter 11: Inventory Management                              | Quiz 5 | Role-based Assignment 1 |
| Week 6  | February 14 <sup>th</sup>  | Chapter 12: Aggregate Operations Planning & Master Scheduling | Quiz 6 | Assignment 2            |
| Week 7  | February 21 <sup>st</sup>  | Midterm Exam  |        |                         |
| Week 8  | February 28 <sup>th</sup>  | Chapter 13: MRP & ERP   | Quiz 7 | Assignment 3            |
| Week 9  | March 7 <sup>th</sup>  |   |        |                         |
| Week 10   | March 14 <sup>th</sup>   | Chapter 14: Just-in-time & Lean Production                    | Quiz 8 | Role-based Assignment 2 |
| Week 11   | March 21 <sup>st</sup>   | Chapter 15: Supply Chain Management                           | Quiz 9 |                         |
| Week 12   | March 28 <sup>th</sup>   |   |        |                         |
| Week 13   | April 4 <sup>th</sup>  | Review for Final Exam   |        | Assignment 4            |
| Week 14   | April 11 <sup>th</sup>   | Final Exam: April 17 <sup>th</sup>                            |        |                         |
| Classes end: Tuesday, April 12 <sup>th</sup> 2022   |  |   |        |                         |
| Final Examination Period: Thursday, April 14 to Friday, April 29  |  |   |        |                         |
| All examinations MUST be written during the scheduled examination period.   |  |   |        |                         |
| Note that this structure represents a plan and is subject to adjustment term by term.   |  |   |        |                         |
| The instructor and the University reserve the right to modify elements of the course during the term. The University may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification |  |   |        |                         |

becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes.

| <b>4. ASSESSMENT OF LEARNING *including dates*</b> | <b>Weight</b> |
|--|---------------|
| Quizzes  | 25%           |
| Assignments  | 20%           |
| Midterm  | 20%           |
| Final Examination                                  | 35%           |
| Bonus Work   | {+bonus 2%}   |
| <b>TOTAL</b>                                       | <b>100%</b>   |

Percentage grades will be converted to letter grades and grade points per the University calendar.

#### **5. LEARNING OUTCOMES**

1. Explain how an operations strategy is a pattern of decisions about processes and supply chains that together achieve specific competitive priorities.
2. Identify the connections between operations management and other functions of the organization.
3. Formulate appropriate solutions in forecasting, inventory, lean systems, capacity, scheduling and resource planning.
4. Use computer software (i.e., Excel) and quantitative tools to make operational decisions.

#### **6. COURSE OUTLINE – APPROVED ADVISORY STATEMENTS**

##### **ANTI-DISCRIMINATION**

The Faculty of Engineering is concerned with ensuring an environment that is free of all discrimination. If there is a problem, individuals are reminded that they should contact the Department Chair, the Sexual Harassment Officer or the Human Rights Consultant, as soon as possible.

[http://www.mcmaster.ca/policy/General/HR/Discrimination\\_Harassment\\_Sexual\\_Harassment-Prevention&Response.pdf](http://www.mcmaster.ca/policy/General/HR/Discrimination_Harassment_Sexual_Harassment-Prevention&Response.pdf)

##### **ACADEMIC INTEGRITY**

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity. It is your responsibility to understand what constitutes academic dishonesty.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at <https://secretariat.mcmaster.ca/university-policies-procedures-guidelines/>

The following illustrates only three forms of academic dishonesty: The following illustrates only three forms of academic dishonesty:

- plagiarism, e.g. the submission of work that is not one’s own or for which other credit has been obtained.
- improper collaboration in group work.
- copying or using unauthorized aids in tests and examinations.

##### **AUTHENTICITY / PLAGIARISM DETECTION**

Some courses may use a web-based service (Turnitin.com) to reveal authenticity and ownership of student submitted work. For courses using such software, students will be expected to submit their work electronically either directly

to Turnitin.com or via an online learning platform (e.g. A2L, etc.) using plagiarism detection (a service supported by Turnitin.com) so it can be checked for academic dishonesty.

Students who do not wish their work to be submitted through the plagiarism detection software must inform the Instructor before the assignment is due. No penalty will be assigned to a student who does not submit work to the plagiarism detection software. All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line search, other software, etc.). For more details about McMaster's use of Turnitin.com, please go to [www.mcmaster.ca/academicintegrity](http://www.mcmaster.ca/academicintegrity).

### **COURSES WITH AN ON-LINE ELEMENT**

Some courses may use on-line elements (e.g. e-mail, Avenue to Learn (A2L), LearnLink, web pages, capa, Moodle, ThinkingCap, etc.). Students should be aware that, when they access the electronic components of a course using these elements, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in a course that uses on-line elements will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

### **ONLINE PROCTORING**

Some courses may use online proctoring software for tests and exams. This software may require students to turn on their video camera, present identification, monitor and record their computer activities, and/or lock/restrict their browser or other applications/software during tests or exams. This software may be required to be installed before the test/exam begins.

### **COMMUNICATIONS**

It is the student's responsibility to:

- Maintain current contact information with the University, including address, phone numbers, and emergency contact information.
- Use the University provided e-mail address or maintain a valid forwarding e-mail address.
- Regularly check the official University communications channels. Official University communications are considered received if sent by postal mail, by fax, or by e-mail to the student's designated primary e-mail account via their @mcmaster.ca alias.
- Accept that forwarded e-mails may be lost and that e-mail is considered received if sent via the student's @mcmaster.ca alias.
- Check the McMaster/Avenue email and course websites on a regular basis during the term.

### **CONDUCT EXPECTATIONS**

As a McMaster student, you have the right to experience, and the responsibility to demonstrate, respectful and dignified interactions within all of our living, learning and working communities. These expectations are described in the Code of Student Rights & Responsibilities (the "Code"). All students share the responsibility of maintaining a positive environment for the academic and personal growth of all McMaster community members, whether in person or online.

It is essential that students be mindful of their interactions online, as the Code remains in effect in virtual learning environments. The Code applies to any interactions that adversely affect, disrupt, or interfere with reasonable participation in University activities. Student disruptions or behaviours that interfere with university functions on online platforms (e.g. use of Avenue 2 Learn, WebEx or Zoom for delivery), will be taken very seriously and will be investigated. Outcomes may include restriction or removal of the involved students' access to these platforms.

### **ACADEMIC ACCOMMODATION OF STUDENTS WITH DISABILITIES**

Students with disabilities who require academic accommodation must contact Student Accessibility Services (SAS) at 905-525-9140 ext. 28652 or [sas@mcmaster.ca](mailto:sas@mcmaster.ca) to make arrangements with a Program Coordinator. For further information, consult McMaster University's Academic Accommodation of Students with Disabilities policy.

#### **REQUESTS FOR RELIEF FOR MISSED ACADEMIC TERM WORK**

McMaster Student Absence Form (MSAF): In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar "Requests for Relief for Missed Academic Term Work".

#### **ACADEMIC ACCOMMODATION FOR RELIGIOUS, INDIGENOUS OR SPIRITUAL OBSERVANCES (RISO)**

Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the RISO policy. Students should submit their request to their Faculty Office normally within 10 working days of the beginning of term in which they anticipate a need for accommodation or to the Registrar's Office prior to their examinations. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests. <http://www.mcmaster.ca/policy/Students-AcademicStudies/Studentcode.pdf>

#### **COPYRIGHT AND RECORDING**

Students are advised that lectures, demonstrations, performances, and any other course material provided by an instructor include copyright protected works. The Copyright Act and copyright law protect every original literary, dramatic, musical and artistic work, including lectures by University instructors

The recording of lectures, tutorials, or other methods of instruction may occur during a course. Recording may be done by either the instructor for the purpose of authorized distribution, or by a student for the purpose of personal study. Students should be aware that their voice and/or image may be recorded by others during the class. Please speak with the instructor if this is a concern for you.

#### **EXTREME CIRCUMSTANCES**

The University reserves the right to change the dates and deadlines for any or all courses in extreme circumstances (e.g., severe weather, labour disruptions, etc.). Changes will be communicated through regular McMaster communication channels, such as McMaster Daily News, A2L and/or McMaster email.

#### **SCHEDULE OF ACTIVITIES**

This lecture schedule is based upon current university and public health guidelines and may be subject to changes during the term. Any changes to the schedule or course delivery will be communicated on the course announcements section on Avenue to Learn. Please check the announcements prior to attending class.