INFORMATION SYSTEMS AND OPERATIONS MANAGEMENT, BS

Banner Code: BU-BS-ISOM

Academic Advising
Phone: 703-993-1880
Email: masonbus@gmu.edu

Administration

- Amitava Dutta, Chair, Information Systems and Operations Management Area

The BS in Information Systems and Operations Management (ISOM) prepares students with the skills to analyze and leverage information systems and operational processes to address real-world problems and opportunities. The curriculum highlights the interaction of technology, processes, and people, helping students gain an understanding of these components and their impact on business value. ISOM graduates apply this knowledge of information technology and operations management to analyze, design, and improve business processes through better information systems design and implementation, and associated project management. Further, ISOM graduates deliver seamless technology-enabled solutions for improving organizational processes and supply chains by integrating different business functions, collaborating with business units in defining requirements, identifying new IT-driven business opportunities, prototyping the solutions, and managing complex projects. ISOM majors also have opportunities to pursue specialized elective tracks in operations, supply chain management, business analytics, and information security.

Admissions & Policies

Policies

Academic Policies
Students should become familiar with the university’s general academic policies in addition to those specific to each academic unit.

E-mail
George Mason University uses only Mason e-mail accounts to communicate with enrolled students. Students should activate their Mason e-mail, use it to communicate with their school/department/program and other administrative units, and check it regularly for important information.

Study Elsewhere Policy
A student who has matriculated at Mason may transfer a limited number of hours (9 for undergraduates, 6 for graduates) of coursework in School of Business disciplines from another institution (not including registration through the Consortium of Universities of the Washington Metropolitan Area or coursework completed through the Center for Global Education). Any course attempted elsewhere must take place more than 50 miles from the George Mason University Fairfax campus.

Special instructions for School of Business students: courses that are attempted at a two-year institution may not be used to fulfill upper-level requirements. Any course that a student wished to transfer to fulfill major or graduate-level course requirements in the School of Business must be attempted at an institution accredited by the Association to Advance Collegiate Schools of Business (AACSB).

For additional information, see AP.1.4.2 Permission to Study Elsewhere.

Undergraduate Internship Policy
The School of Business recognizes the importance of experiential education in both learning to apply theory to practice and positioning students for success in their careers. Because the School of Business is committed to supporting students’ professional success, the School requires that all student internships for credit be registered with the School of Business as either BUS 492 Undergraduate Internship or ACCT 492 Internship in Accounting. Students may enroll in a maximum of 6 credits for these courses. For students in catalog years Fall 2016 and beyond, one internship course may apply to the major, and a second internship course would apply as elective credit. For students in catalog years prior to Fall 2016, a maximum of 6 credits of internship may apply to general electives.

Termination from the Major
A grade of C or higher is required in each of the School of Business listed core courses. Students will not be permitted to make more than three attempts to achieve a C or higher in the following School of Business core courses:

- ACCT 303 Accounting for Decision Making or ACCT 330 Financial Accounting I
- BULE 303 Legal Environment of Business
- BUS 303 Develop Professional Skills II: Advanced Elements
- FNAN 303 Financial Management
- MGMT 303 Principles of Management
- MIS 303 Introduction to Business Information Systems (Mason Core)
- MKTG 303 Principles of Marketing
- OM 303 Operations Management

Those who do not successfully complete these core courses within three attempts will be terminated from their major and will not be eligible to receive a degree from the School of Business. Students terminated from the School of Business are prohibited from enrolling in any School of Business course. Students terminated from the School of Business are permitted to declare a business minor. For more information about this, see AP.5.2.4 Termination from the Major.

University Consortium
Students should review university policies regarding the University Consortium under Special Registration Procedures in the Academic Policies section of this catalog. Students who have attempted or failed a course at Mason are not permitted to take the equivalent course through the consortium under any circumstance. All consortium registration requests must be submitted to the dean’s office at least 3 weeks prior to the first day of classes for the relevant semester at Mason.

Any consortium course that a student wishes to register for to fulfill major or graduate-level course requirements in the School of Business
must be attempted at an institution accredited by the Association to Advance Collegiate Schools of Business (AACSB).

**Undergraduate Course Overload Policy**
The School of Business recommends that undergraduate students attempt no more than 18 credits in an academic semester and no more than 14 credits in a summer term. Students wishing to attempt more than 18 credits must submit a Permission to Overload form to their academic advisor.

To be eligible for a course overload, a student must fulfill all of the following criteria:

- At least a 3.0 cumulative GPA at Mason
- Have completed all courses successfully in his/her previous semester with no Fs or incompletes (IN)
- Complete the Permission to Overload form and obtain an academic advisor's signature

Freshmen and transfer students in their first semesters are not given permission for overloads as they have yet to establish an academic record at George Mason University.

If approved for an overload, the student is responsible for adding the additional class(es) and paying for the related tuition by the official university deadlines.

**Appeals Process**
The School of Business strives to maintain policies and procedures that are consistent with those of the University, as well as in the best interest of our students. If you have any questions concerning a particular policy or procedure, please contact the Office of Student Success & Academic Services, Room 008 of Enterprise Hall (703-993-1880) or visit business.gmu.edu (http://business.gmu.edu).

**Courses Excluded from any School of Business BS Degree**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>SWE 401</td>
<td>Internship Reflection</td>
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<td>MUSI 394</td>
<td>Ethnomusicology Internship</td>
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<td>COMM 450</td>
<td>Internship in Communication</td>
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<td>FAVS 450</td>
<td>Internship in Film and Video Studies</td>
<td>3</td>
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<td>GOVT 480</td>
<td>Internship</td>
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<td>MUSI 496</td>
<td>Internship</td>
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<td>CONF 370</td>
<td>Internship Field Experience</td>
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<tr>
<td>PHIL 306</td>
<td>Philosophy Internship</td>
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<td>RELI 426</td>
<td>Religious Studies Internship</td>
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<tr>
<td>ARTH 393</td>
<td>Art History Internships</td>
<td>3-6</td>
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<td>GCH 498</td>
<td>Global and Community Health Internship</td>
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<td>GAME 491</td>
<td>Internship</td>
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<td>HAP 498</td>
<td>Health Administration Internship (Mason Core)</td>
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<td>HDFS 499</td>
<td>Advanced Internship Analysis in Human</td>
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<td>EVPP 494</td>
<td>Internship</td>
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<td>ENGH 495</td>
<td>Internship</td>
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<tr>
<td>MUSI 395</td>
<td>Teaching Internship</td>
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<td>INTS 290</td>
<td>Internship</td>
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<td>INTS 390</td>
<td>International Internship</td>
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<td>ECON 498</td>
<td>Internship</td>
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<td>ASTR 409</td>
<td>Astronomy Internship</td>
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<td>SPMT 490</td>
<td>Internship (Mason Core)</td>
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<td>TOUR 490</td>
<td>Hospitality, Tourism, and Events Internship</td>
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<td>CLIM 409</td>
<td>Research Internship</td>
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<td>CHIN 490</td>
<td>Internship in Chinese Studies</td>
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<td>CONS 498</td>
<td>Internship</td>
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<td>THR 455</td>
<td>Theater Education Internship</td>
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<td>AFAM 490</td>
<td>Internship</td>
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<tr>
<td>KINE 490</td>
<td>Kinesiology Internship III (Mason Core)</td>
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<td>AMGT 489</td>
<td>Internship in Arts Management</td>
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<td>HDFS 498</td>
<td>Internship and Analysis in Human Development</td>
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<td>ANTH 495</td>
<td>Internship</td>
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<td>PRLS 490</td>
<td>Recreation Management Internship (Mason Core)</td>
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<td>GGS 480</td>
<td>GGS Internship</td>
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<tr>
<td>SPAN 490</td>
<td>Internship in Spanish</td>
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<tr>
<td>AVT 489</td>
<td>Internship in Art and Visual Technology</td>
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<tr>
<td>USST 490</td>
<td>Internship</td>
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<td>WMST 400</td>
<td>Internship in Women and Gender Studies</td>
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<tr>
<td>CDS 491</td>
<td>Internship</td>
<td>1-3</td>
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<tr>
<td>HHS 480</td>
<td>Research Internship in Health and Human Services</td>
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<tr>
<td>CRIM 480</td>
<td>Internship</td>
<td>6-12</td>
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<tr>
<td>HIST 399</td>
<td>Internship</td>
<td>1-9</td>
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<td>RHBS 490</td>
<td>RS: Clinical Research Internship</td>
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<td>LAS 490</td>
<td>Internship</td>
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<tr>
<td>HAP 480</td>
<td>Research Internship in Health and Human Services</td>
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<tr>
<td>KINE 341</td>
<td>Kinesiology Internship I</td>
<td>3</td>
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<tr>
<td>SOCW 480</td>
<td>Research Internship in Health and Human Services</td>
<td>3</td>
</tr>
<tr>
<td>MUSI 495</td>
<td>Internship in Music Education (Mason Core)</td>
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<tr>
<td>KINE 441</td>
<td>Kinesiology Internship II</td>
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<td>PHYS 409</td>
<td>Physics Internship</td>
<td>3</td>
</tr>
<tr>
<td>HHS 492</td>
<td>RS: Internship in Clinical Research</td>
<td>3</td>
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<tr>
<td>SOCI 416</td>
<td>Internship in Sociology</td>
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<tr>
<td>FRLN 490</td>
<td>Internship in Foreign Language Studies</td>
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<td>ENGR 395</td>
<td>Engineering Internship</td>
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<td>GEOL 480</td>
<td>Internship</td>
<td>1-3</td>
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<tr>
<td>AVT 453</td>
<td>Professional Practices</td>
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<td>CVP 489</td>
<td>Field Experience in the Arts</td>
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<td>GLOA 495</td>
<td>Global Experiential Learning</td>
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<tr>
<td>KINE 330</td>
<td>Seminar in Kinesiology</td>
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<tr>
<td>ECED 490</td>
<td>Internship in Early Childhood Education</td>
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<tr>
<td>FRSC 406</td>
<td>Forensic Internship</td>
<td>3</td>
</tr>
</tbody>
</table>
Requirements

Degree Requirements

Total credits: 120

School of Business students pursuing a BS degree must complete a minimum of 120 credits, including the Mason Core requirements, business foundations, business core and major requirements. In addition, the following requirements must be met:

- A minimum of 45 credits at the 300- or 400-level.
- A minimum of 30 credits of School of Business core and major courses at Mason.
- At least 9 credits required for the specific major and BUS 498 Capstone Course: Advanced Business Models (Mason Core) taken at Mason.
- A grade of C or higher earned in the business foundations, business core and major requirements.

Students should carefully examine prerequisites for School of Business courses. Students may be removed from a course if they enroll without having fulfilled the prerequisites.

Mason Core Requirements

School of Business students must complete the Mason Core requirements, plus 1 additional credit of natural science (the School of Business natural science requirement must be fulfilled by completing two 4-credit laboratory sciences). Some Mason Core requirements may already be fulfilled by the major requirements listed below. Students are strongly encouraged to consult their advisors to ensure they fulfill all remaining Mason Core requirements.

### Code | Title | Credits |
--- | --- | --- |
**Foundation Requirements**
Written Communication | 6
Oral Communication | 3
**Core Requirements**
Arts | 3
Literature | 3
Natural Science | 8
Western Civilization/World History | 3
**Total Credits** | 26

1. School of Business students required to complete 8 credits of natural science by completing two 4-credit laboratory sciences.

### Business Core

A grade of C or higher is required in each of the School of Business listed core courses.

#### Code | Title | Credits |
--- | --- | --- |
ACCT 303 | Accounting for Decision Making | 3
or ACCT 330 | Financial Accounting I | 3
BULE 303 | Legal Environment of Business | 3
BUS 303 | Develop Professional Skills II: Advanced Elements | 3
FNAN 303 | Financial Management | 3
MGMT 303 | Principles of Management | 3
MIS 303 | Introduction to Business Information Systems (Mason Core) | 3
MKTG 303 | Principles of Marketing | 3
OM 303 | Operations Management | 3
**Total Credits** | 24

1. Students will not be permitted to make more than three attempts to achieve a C or higher in this course. Those who do not successfully complete these core courses within three attempts will be terminated from their major and will not be eligible to receive a degree from the School of Business. Students terminated from the School of Business are prohibited from enrolling in any School of Business course. Students terminated from the School of Business are permitted to declare a business minor. For more information about this, see AP.5.2.4 Termination from the Major.

### General Electives

#### Code | Title | Credits |
--- | --- | --- |
Select 18-19 credits | 18-19
**Total Credits** | 18-19
General electives may be selected from any University or School of Business course, except courses designated for the Business minor (MBUS). Credits awarded as Associate Degree Elective Credit (ADEC) as part of a student’s transfer evaluation are also excluded from general electives.

**Major Requirements in Information Systems and Operations Management**

**Required Courses**

- MIS 310  Database Management Systems  3
- MIS 330  Systems Analysis and Design  3
- OM 493  Management of Technology Projects  3

**Electives**

Select 12 credits from the following list to fulfill the elective requirement as well as any other 300-400 level MIS or OM courses:

- MIS 302  Introduction to Programming for Business Applications  2
- MIS 320  Networks and Security  3
- MIS 410  Advanced Database Systems  3
- MIS 412  E-Business Systems Development  3
- MIS 415  Information Systems Audit and Control  3
- MIS 420  Information Security and Assurance  3
- MIS 430  Data Warehousing  3
- MIS 431  Data Mining for Business Applications  3
- MIS 462  Honors Seminar in Management Information Systems  3
- MIS 491  Seminar in Management Information Systems  3
- OM 320  Supply Chain Management in a Global Economy  3
- OM 352  Management Science  3
- OM 435  Business Process Analysis and Simulation  3
- OM 452  Business Forecasting  3
- OM 456  Quality Management  3
- OM 462  Honors Seminar in Operations Management (Topic Varies)  3
- OM 491  Seminar in Operations Management  3

**Total Credits** 21

Excluding MIS 301 Introduction to Business Information Systems or MIS 303 Introduction to Business Information Systems (Mason Core) or OM 301 Operations Management or OM 303 Operations Management

It is strongly recommended that students planning to major in ISOM take MIS 302 Introduction to Programming for Business Applications as part of their program.

**Optional Concentrations**

Students have considerable flexibility in their choice of electives and may choose from two concentrations of study: one in Operations and Supply Chain Management (OSCM) and the other in Management Information Systems (MIS). Students are strongly urged to discuss their choice of electives and programs of study with their academic advisor and an ISOM faculty member. Concentrations must be declared prior to a student filing an intent to graduate.

**Concentration in Operations and Supply Chain Management (OSCM)**

If a student has taken any four of the following seven electives, beyond the ISOM required courses, s/he can declare an OSCM concentration.

- OM 320  Supply Chain Management in a Global Economy  3
- OM 352  Management Science  3
- OM 435  Business Process Analysis and Simulation  3
- OM 452  Business Forecasting  3
- OM 456  Quality Management  3
- OM 462  Honors Seminar in Operations Management (Topic Varies)  3
- OM 491  Seminar in Operations Management  3

**Total Credits** 21

**Concentration in Management Information Systems (MIS)**

If a student has taken any four of the following eight electives, beyond the ISOM required courses, he/she can declare an MIS concentration.

- MIS 302  Introduction to Programming for Business Applications  3
- MIS 320  Networks and Security  3
- MIS 412  E-Business Systems Development  3
- MIS 430  Data Warehousing  3
- MIS 462  Honors Seminar in Management Information Systems (Topic Varies)  3
- MIS 491  Seminar in Management Information Systems  3

**Total Credits** 18

**Capstone**

Students must successfully complete all Business Core courses to be eligible to enroll in BUS 498 Capstone Course: Advanced Business Models (Mason Core).

- BUS 498  Capstone Course: Advanced Business Models (Mason Core)  3

**Total Credits** 3

**Second Majors in Information Systems and Operations Management**

Students declaring a second major in Information Systems and Operations Management must complete the three required courses and three elective courses for the major.

**Honors**

**Honors in the Major**

The School of Business Information Systems and Operations Management Honors Program provides highly motivated students...
majoring in ISOM with an enriched academic experience integrating curricular, co-curricular and extra-curricular development. Admission to the Honors Program is by invitation only. Students who have been found responsible for an Honor Code violation are not eligible for the program.

Admission Requirements
- Minimum 3.0 cumulative GPA and 3.5 GPA in the ISOM major.
- Two academic/professional references.
- Once admitted to the program, students with a cumulative GPA below 3.0 will be dropped from the program.

Curricular Requirements
- MIS 303 Introduction to Business Information Systems (Mason Core) earning a grade of A- or better.
- OM 303 Operations Management earning a grade of A- or better.
- A grade of B or better in Business Core curriculum courses:
  - ACCT 303 Accounting for Decision Making 3
  - or ACCT 330 Financial Accounting I
  - BULE 303 Legal Environment of Business 3
  - BUS 303 Develop Professional Skills II: Advanced Elements 3
  - FNAN 303 Financial Management 3
  - MGMT 303 Principles of Management 3
  - MKTG 303 Principles of Marketing 3
- One of the two ISOM Honors seminars: MIS 462 Honors Seminar in Management Information Systems (Topic Varies) or OM 462 Honors Seminar in Operations Management (Topic Varies).

Extra-Curricular Requirements
- The student must show a high degree of engagement in MISOMA or another School of Business student organization, preferably in a leadership role.

Requirements for the Honors Designation:
- Honors students must graduate with a minimum 3.00 cumulative GPA and 3.50 GPA in the major.
- Honors students must meet all curricular and extra-curricular requirements mentioned previously at graduation.