

Business Core for Bachelor of Business Management (BBM)

1. OPIM 101 Decision Analysis
2. OPIM 201 Operations Management

Course code/title	Course Description	Course coordinator / Instructors	No. of Sections
OPIM 101 Decision Analysis	The objective of this course is to introduce students to decision analysis, which is the application of the scientific method to managerial and personal decision-making. Selected decision analysis tools will be introduced to help making decisions in certain and uncertain environments, such as linear and integer programming and decision trees. The usefulness of these tools will be illustrated through examples drawn from all functional areas of business. These example applications include capacity and inventory management, portfolio management, supply chain management and project scheduling.	<ul style="list-style-type: none"> • Onur BOYABATLI <i>(Course coordinator)</i> • Marcus ANG • Pascale CRAMA • FENG Guiyun • Joyce LOW • Leon XU • Daniel ZHENG • GOH Siong Thye • Sean LAM • LIEW Sing Loon • LOW Chee Seng • Sharafali MOOSA 	23-25 per year, 11-13 per term
OPIM 201 Operations Management	Companies produce and deliver goods or services to meet customer demand through various operations. In this course, students discover how the operations of any organization can be designed, analyzed and improved to lift its performance, whether the organization is a bank, a hospital, a resort, a manufacturing plant, or a fashion retailer. The course reveals how operations management skills can be used to reduce costs, lower inventories, cut waiting times, improve quality, enhance service levels, and increase revenues and company profits. Specifically, students will gain practical knowledge of process analysis and design, demand forecasting, capacity planning, workflow planning and control, inventory management, quality management, and lean operations. With a focus on the basic concepts that govern operations management, the course also provides the necessary foundation to pursue further development in business management.	<ul style="list-style-type: none"> • Helen ZHOU <i>(Course coordinator)</i> • Buket AVCI • FANG Xin • Bhavani Shanker UPPARI • WEE Kwan Eng • YANG Kum Khiong • GOH Shao Hung • KOH Niak Wu • LOW Chee Seng • NEO Thiam Soon • OH Se-kyoung 	22-25 per year, 11-13 per term

Operations Management Major's Compulsory Courses

1. OPIM 311 Service Processes
2. OPIM 321 Supply Chain Management

Course code/title	Course Description	Course coordinator / Instructors	No. of Sections
OPIM 311 Service Processes	This course explores the dimensions of successful service firms through the use of case studies and lectures. It prepares students for enlightened management and suggests creative entrepreneurial opportunities. Outstanding service organizations are managed differently than their "merely good" competitors. Actions are based on totally different assumptions about the way success is achieved. The results show not only in terms of conventional measures of performance but also in the enthusiasm of the employees and quality of customer satisfaction. Beginning with the service encounter, service managers must blend marketing, technology, people, and information to achieve a distinctive competitive advantage. As the service sector is the fastest-growing sector of the economy, this course is also intended to help students discover entrepreneurial opportunities.	<ul style="list-style-type: none"> • Marcus ANG (Course coordinator) • SHE Zhaowei • Sean LAM 	4-6 per year, 2-3 per term
OPIM 321 Supply Chain Management	Matching supply with demand is a primary challenge for a firm: excess supply is too costly, inadequate supply irritates customers. Matching supply to demand is easiest when a firm has a flexible supply process, but flexibility is generally expensive. In this course we will learn (1) how to assess the appropriate level of supply flexibility for a given industry and (2) explore strategies for economically increasing a firm's supply flexibility. Lastly we will study coordination and incentives across multiple firms in a supply chain. While tactical models and decisions are part of this course, the emphasis is on the qualitative insights needed by general managers or management consultants. We will demonstrate that companies can use (and have used) the principles from this course to significantly enhance their competitiveness.	<ul style="list-style-type: none"> • FANG Xin (Course coordinator) • GAO Yini • LOW Chee Seng • Alan ZELLER 	5-6 per year, 2-3 per term

Operations Management Major's Electives

(Note: Not all electives will be offered every term)

1. [OPIM 313 Project Management](#)
2. [OPIM 314 Logistics and Transportation Management](#)
3. [OPIM 318 Sustainable Operations](#)
4. [OPIM 319 Operations Strategy: Principles and Practice](#)
5. [OPIM 322 High Performance Warehousing and Fulfillment](#)
6. [OPIM 324 Global Supply Chains](#)
7. [OPIM 325 Sales and Operations Planning](#)
8. [OPIM 326 Service and Operations Analytics](#)
9. [OPIM 331 Computer Simulation](#)
10. [OPIM 341 Procurement and Strategic Sourcing](#)
11. [OPIM 343 Port-Focal Logistics and Maritime Operations](#)
12. [OPIM344 Sustainable Shipping and Ports](#)
13. [OPIM 346 Operations and Supply Chain in Healthcare](#)
14. [OPIM 347 Shipping Strategy – The Global and Digital Challenges](#)
15. [OPIM 348 Supply Chain Analytics](#)
16. [MGMT 108 Introduction to Business Analytics](#)
17. [MGMT 317 Managing Process Improvements](#)

Course code/title	Course Description	Instructors	No. of Sections
OPIM 313 Project Management	<p>This course aims to provide students with a sound understanding and knowledge of basic concepts and analytical skills critical to effective project management in any industry. The students will acquire a range of “soft” skills (behavioral) and “hard” (analytical) tools and techniques, and learn how to link theory to real-world projects. Topics covered include project selection, initiation, planning, implementation, control and evaluation. With the project life cycle in mind, topics such as the role of the project manager and organization, scheduling and resources allocation will also be covered.</p>	<ul style="list-style-type: none"> • Pascale CRAMA • LIEW Sing Loon 	1-3 per year
OPIM 314 Logistics and Transportation Management	<p>Transportation is an integral part of the global supply chain system. Goods cannot move on their own from supply points to demand locations, conferring transportation a central role in the global distribution of freight. Transportation creates value-add in a supply chain by performing the "moving" function in the physical distribution of products and it facilitates international trade and hence globalisation. In broader terms, transport connectivity is often referred to as the lifeline of a nation and is often a precondition for economic progress and development.</p> <p>This course explores the business issues in the design and operation of international transportation systems and underlines their strategic importance to firms and the economy. It draws upon the disciplines of operations management, decision analysis and transport economics to present a holistic view of the theories and practices of transportation management. The course also discusses the core concepts and terminologies of road, air, rail, sea, and intermodal transportation, as well as the implications for contemporary supply chain management.</p>	<ul style="list-style-type: none"> • Joyce LOW • Goh Shao Hung 	1-2 per year
OPIM 318 Sustainable Operations	<p>The objective of this course is to study how companies use their operations to improve environmental (and social) performance and contribute to business success at the same time. Many companies have started doing so by building sustainability into their operations. A focus on reducing environmental impact not only allows these companies to comply with increased regulations but also to reduce their costs, to improve the quality of their products, and to enhance the reputation of their brands. In addition, a new brand of companies is going beyond simply reducing negative externalities and actively tries to create a positive impact on the world.</p>	<ul style="list-style-type: none"> • Buket AVCI • Simon SCHILLEBEECKX • Lieven DEMEESTER 	1-2 per year

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	<p>In this course, students will learn how citizens, governments, customers, and employees are creating pressures for more sustainable development and how operations managers are responding to these pressures with waste reduction, pollution prevention, and product stewardship. Students will also study specific tools and methods such as environmental management systems, life cycle analysis, green buildings, green purchasing, design-for-environment, recycling, remanufacturing, servitization and industrial symbiosis. Through the course, students will also learn how to create a successful strategy for sustainable operations by incorporating sustainability considerations into business strategy, improvement planning, product and process design, supply management, risk management and both internal and external reporting systems.</p>		
<p>OPIM 319 Operations Strategy: Principles and Practice</p>	<p>How did ZARA become one of the fastest growing and most profitable brands in fashion retailing? How did Wal-Mart grow to be the world's largest retailer? Largely the answer is that ZARA and Wal-Mart view their operational capabilities as an important and integral part of their competitive advantage. As do other successful companies, such as Procter & Gamble, Toyota, and Coca Cola, they invest strategically in physical plants and facilities, in process and information technology, in employees, suppliers, and distributor relationships, and perhaps most importantly, in organizational practices and know-how. The objective of this course is to provide students with a set of qualitative frameworks and quantitative tools to analyze and guide the long-term, strategic decisions for a company's operations function.</p> <p>This course caters to those interested in management and business consulting, general management, and operations careers. Finance specialists interested in assessing the risks, the opportunities, the competitive advantages, and ultimately the value embedded in a company's operations will benefit from the course as well.</p>	<ul style="list-style-type: none"> • Lieven DEMEESTER • NEO Thiam Soon 	1-2 per year
<p>OPIM 322 High Performance Warehousing and Fulfillment</p>	<p>As the world becomes more globalized many companies achieve competitive advantage by paying substantial attention on effective supply chain design and operations. Warehouses are consolidation hubs of various products in a supply chain. To support business that covers a wide range of markets it is common for a warehouse to store thousands of products. These products pass through the warehouse in huge volume daily, and so it is important to run the warehouse efficiently. Besides the traditional storage function, warehouses are increasingly forced to perform responsive and accurate customer order fulfillment and other</p>	<ul style="list-style-type: none"> • LIM Yun Fong 	1-2 per year

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	<p>value-added services. High performance in product warehousing, order fulfillment, and value-added services becomes crucial to the success of many companies in today's competitive business environment. We will introduce various operation models that are theoretically appealing and practically feasible. Some case studies will also be discussed. <i>This course is especially useful for those who are interested in consulting careers in supply chain management and logistics.</i></p>		
<p>OPIM 324 Global Supply Chains</p>	<p>Global Supply Chain refers to the cross-border organization of the activities required to produce goods or services and bring them to consumers through inputs and various phases of development, production and delivery (International Labour Organization). As global trade is dependent on global supply chain, companies make investment decisions to globalize, setting up production facilities overseas and sales offices beyond their domestic market. The key aspects for companies embarking on global Supply Chain involves cross-border sourcing, overseas production, global planning and international distribution, where the various components for a final product could be sourced from different parts of the world, and manufactured at one or multiple locations and have them distributed to different markets.</p> <p>Managing a global supply chain is also no longer about driving down cost, but it is how companies can maintain their competitiveness and global supply chains has never been more challenging and disruptive in the current environment of pandemic and geo-political tensions. In addition, e-commerce has also changed the design for global supply chain as well. This course provides students with a practical lens and frameworks regarding global supply chain. Students learn the key concepts on global supply chain management, together with special topics on maritime logistics, technology and green supply chain that affects the development of global supply chain. Understanding them would enable the students to better appreciate the complexities when handling global supply chain activities in future.</p> <p>Topics covered include: considerations for global sourcing, selection criteria for global production locations, planning in an uncertainty, volatility, complexity and ambiguity environment, various international methods of entry to overseas market, e-commerce distribution, incoterms and different modes of transportation, terms of payment, customs requirements, and maritime distribution network. Business cases and real-life examples will be used in the course. Industry speakers will be invited as guest lecturers to share the challenges and practical solutions relating to global supply chain. This course is highly relevant for the current business</p>	<ul style="list-style-type: none"> • AU Yang Sian • NEO Kin Kah 	<p>1-2 per year</p>

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	environment and is recommended for those interested in working for global companies managing cross-border business..		
OPIM 325 Sales and Operations Planning	<p>According to the well-established SCOR (Supply Chain Operation Reference) framework planning is a major process block in any supply chain. In today's environment the importance of business planning is magnified by globalization (and thus more complex supply chains), volatility of demand and ever more demanding customers. Planning activities and tasks cut across the entire organization, and this course offers an approach to integrating all stakeholders' inputs and driving decisions to deliver superior results for the company and a higher level of customer service.</p> <p>The course offers a holistic understanding of S&OP, drilling into the key building blocks of the process (demand planning, supply planning,...), the stakeholders and KPIs. It also covers the technology available to support the process and discuss the approach to implement such a process in any company. Besides the theoretical foundation, the course brings several opportunities for hands-on experience via case studies, business simulation games and industry practitioner sharing sessions.</p> <p>The Sale and Operations Planning course will equip students with sound knowledge of planning process in a company and how they drive the bottom-line results. This course is recommended to students with career ambitions in business planning, operation planning, consulting and general management.</p>	<ul style="list-style-type: none"> • Roxanne DESMICHT 	1 per year
OPIM 326 Service and Operations Analytics	<p>The increasing availability of data is changing the way organizations are thinking about themselves and the way they interact with the world. Data is helping improve the profits of businesses, the quality of life of individuals, the performance of sports teams, and social interactions. In this course you will learn how to use data and analytics to improve the service and operations of the organizations. The course will expose students to real world examples of how analytics is being used from various domains in managing operations and service delivery, e.g., product quality control, revenue management. Through these examples you will learn how to use tools of analytics such as linear regression, logistic regression, classification and regression trees, random forests, clustering, optimization, and visualization techniques in practice. The statistical software R will be used in the course, and class demo will be</p>	<ul style="list-style-type: none"> • GAO Yini • Daniel ZHENG • Vinit MISHRA 	1-3 per year

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	presented in R Notebooks. Students are encouraged to create their assignment and project reports using R Notebooks.		
OPIM 331 Computer Simulation	<p>Computer simulation is a popular tool used by managers to analyze and understand complex systems. These systems can be an existing or a proposed facility that is too complex for traditional analytical tools. In this course, students will learn how to model business systems using commercial simulation software and to analyze and interpret the results.</p> <p>This is a computer simulation programming course. Students are taught simulation through practices by building simulation models. The instructor will build and review some simulation models in class. Students are then expected to build their own simulation models. The success of this course will depend on the student's personal involvement in making simulation a reality.</p>	<ul style="list-style-type: none"> • YANG Kum Khiong 	1 per year
OPIM 341 Procurement and Strategic Sourcing	<p>In today's increasingly competitive and globalized world, firms are trying to find ways to improve their performance and differentiate themselves from their rivals. Clearly, suppliers can have great impact on a firm's total cost and help in this differentiation process. Increased levels of outsourcing and offshoring make correct selection of suppliers and their quality, along with development of relationships between suppliers and producers, more crucial than ever. Whatever the supplier provides, the effective organization needs a robust system to procure the correct goods and services at the best possible price for the organization. Once the organization has made the decision to procure goods and services from another organization, both organizations must clearly define the parameters of the relationship. This course aims to provide students with an understanding of the impact that sourcing and supply management has on the success and profitability of firms in today's business environment. This course will expose students to concepts and principles in strategic sourcing as pursued by leading edge firms. It will generate student interest in pursuing sourcing as a viable career opportunity, be it in retailing, manufacturing, government agencies or non-profit organizations. The course will provide applied learning opportunities in strategic sourcing through a combination of lectures, case analyses, and group exercises.</p>	<ul style="list-style-type: none"> • OH Se-kyoung 	1-2 per year

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OPIM 343 Port-Focal Logistics and Maritime Operations	<p>As much as 90% of world trade is carried via maritime transportation. A wide range of cargoes, each with their own specific handling and storage requirements, pass through the world's ports and terminals every day. Port operations is a complicated business dealing with a number of disparate activities such as the movement of ships, containers, and other cargo, the loading and unloading of ships and containers, and customs activities. Efficient port operations are important to ensure the smooth transition of cargoes, so that these cargoes reach their destination on time.</p> <p>This course introduces the functions of ports and their roles in contemporary logistics. With the intermodal advancements that lead to expanded but overlapping hinterlands, ports face competitive pressure. This course equips students with knowledge on port operations and how ports can provide value in the modern supply chain. The inter-related relationship among shipping lines, stevedores, port operators and the regulatory environment is discussed.</p>	<ul style="list-style-type: none"> • Joyce LOW 	1 per year
OPIM 344 Sustainable Shipping and Ports	<p>International shipping and ports are fundamental to the achievement of world sustainable development. However, the challenges to shipping and ports in providing safe, secure, energy efficient, environmentally and climate friendly services that, at the same time, promote connectivity and trade and enables economic growth are complex and tremendous. These challenges call for a multi-stakeholder approach involving shipping companies, port authorities/port development companies, regulators, financial institutions, research institutions, and other relevant partners. This course addresses the sustainability imperative for shipping and ports and the various solutions that are available to the different industry stakeholders. Indeed, the shipping and ports industries have started to respond to the growing environmental and social concerns of regulators, customers and the local communities in which they operate, while at the same time increasingly recognizing that sustainability may provide for new business opportunities and profitability.</p>	<ul style="list-style-type: none"> • Henrik Sornn-Friese 	1 per year
OPIM 346 Operations and Supply Chain Management in Healthcare	<p>Given the trend of an aging population and rising healthcare costs in many countries around the world, it is important for healthcare service providers to minimise the costs of service delivery while maintaining high quality of health care services, patient satisfaction, safety and other important outcome measures. This course presents elementary operations management and supply chain management</p>	<ul style="list-style-type: none"> • Pascale CRAMA 	1 per year

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	<p>principles before applying them to the healthcare sector. Those topics include, but are not limited to, process optimization, capacity management, logistics, queuing, scheduling, and many more. The application of the operations management tools and methods needs to be tailored to the healthcare context, which the students will explore through a mix of case study discussions and guest speakers.</p> <p>The students will also independently explore an emerging topic in healthcare from an operations management perspective to gain a better understanding of future challenges and opportunities in this industry.</p>		
<p>OPIM 347 Shipping Strategy – The Global and Digital Challenges</p>	<p>Digitalization is a critical component in the present and future of the maritime sector, not only in a technological manner but also as a strategic, cultural and political enabler of change. This course is about digitalization in shipping with a focus on the strategic level, which is the strategic responses to the digitalization of shipping. The course will be centered around three fundamental questions:</p> <ol style="list-style-type: none"> 1) How and why does digitalization challenge and develop global shipping? 2) How and why do shipping companies create digital business models? 3) How and why does digitalization affect various shipping segments in different ways? 	<ul style="list-style-type: none"> • Martin JES IVERSEN 	<p>1 per year</p>
<p>OPIM 348 Supply Chain Analytics</p>	<p>The increasing availability of data is changing the way a supply chain is managed. Supply chain analytics is where data analytics meet supply chain management. Given the conflicting objectives of efficiency and customer satisfaction, data-driven analysis can be useful in achieving supply chain excellence. In this course, you will learn the analytics tools and skills to diagnose and optimize a supply chain. In particular, you will learn how statistical tools and data-based optimization can help supply chain stay competitive and attain its leadership.</p>	<ul style="list-style-type: none"> • WEE Kwan Eng 	<p>1-2 per year</p>
<p>MGMT 108 Introduction to Business Analytics</p>	<p>Technology enhancement has enabled the business world to produce and store very large amounts of data which needs to be processed, managed and analyzed to uncover its hidden value. These values have shown to be an asset to businesses, given its potential to improve the future performance. Companies that want to tap into this potential have to turn to Business Analytics, which helps to gain insights from data that improves business decisions.</p> <p>This course aims to <i>introduce students to the fundamental skills of Analytics</i>. Using Excel as the main software, this course helps students build a foundation needed for advanced analytics by introducing them to data exploration techniques,</p>	<ul style="list-style-type: none"> • Marcus ANG • Pinar Darendeli 	<p>3-4 per year</p>

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	<p>preparing the data for analysis, understanding how to formulate and identify the correct analytical approach to solve the business problem. This course also introduces the use of analytics in related business problems from the areas of Finance, Marketing and Operations.</p>		
<p>MGMT 317 Managing Process Improvements</p>	<p>All firms have processes, most of which can be improved or optimized. Some of these processes include innovation, development, manufacturing, services, internal and external processes. The ability of managers to define, measure, improve and control processes is a key skill set and, combined with leadership, can enhance the success of a firm.</p> <p>In this course, students will develop a combination of practical tool knowledge and project management skills to effectively change and improve important processes. Students will also gain a strong theoretical and practical understanding of six sigma deployment and will have the opportunity to achieve SMU Six Sigma “Greenbelt” certification. Students will learn the DMAIC methodology (Design, Measure, Analyze, Improve, Control) and apply it in real projects. These projects will be sponsored by SMU, local SME’s and MNC’s.</p> <p>This course will also allow students to further develop and get feedback on the following SMU Graduate Learning Outcomes: critical thinking and problem solving, collaboration, communication, self-directedness and meta-learning, and resilience and positivity (see https://cte.smu.edu.sg/smu-pedagogical-framework-graduate-learning-outcomes).</p>	<ul style="list-style-type: none"> • Lieven DEMEESTER • Edmund TAN 	<p>1 per year</p>

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