2018 Student Formula Japan  
– Monozukuri Design Competition –  
2018 SFJ Participation Rules  
(issued: December 21, 2017)

This competition is held by JSAE according to the 2017-18 Formula SAE® Rules, 2018 SFJ Local Rules and 2018 SFJ Participation Rules.

Article 1  Competition Name

2018 Student Formula Japan – Monozukuri Design Competition –

Article 2  Date

Tuesday, September 4 to Saturday, September 8, 2018
* All the date is scheduled by Japan Standard Time, if not specified.
* The detailed time schedule of the competition will be announced by Official Announcement later.

Article 3  Venue

ECOPA (Ogasayama Sports Park), Shizuoka Prefecture  URL: https://www.ecopa.jp/english/

Article 4  Organizer

Society of Automotive Engineers of Japan, Inc. (JSAE)

Article 5  Student Formula Japan Office

Society of Automotive Engineers of Japan, Inc. (JSAE)
ADDRESS: 10-2 GOBANCHO. CHIYODA-KU, TOKYO 102-0076 JAPAN
TEL: +81-3-3262-8214  FAX: +81-3-3261-2204  E-MAIL: formula@jsae.or.jp

Article 6  Competition Officers

<Board of Student Formula Japan>
Chairman: Hiroshi Takemura
Vice Chairmen: Seigo Kuzumaki
                          Takao Kubozuka

<Rules Committee>
Chairman: Kouichi Yamagishi
Vice Chairmen: Yasushi Matsumoto

<Execution Committee>
Chairman: Tadashi Tamasho
Vice Chairmen: Hirotaka Nakazawa
Technical Inspection Leader: Takanari Matsuura
Design Events Leader: Junichi Hasegawa
Article 7  Competition Classes
1. ICV Class
2. EV Class
Up to 98 teams in total.

Article 8  Vehicle Production Regulations
The vehicles shall be fabricated complying with the 2017-2018 Formula SAE® Rules and 2018 SFJ Local Rules.

Article 9  Participation Requirements
The team shall fulfill the following requirements;
1. Team: Each educational institute shall be permitted to register only one team and one vehicle.
   1) However, multiple teams shall be permitted, if the institute has multiple campuses.
   2) It is permitted that one educational institute will have one team for ICV Class and one team for EV Class at 2018 SFJ.
   3) Teams which are formed with members from two or more educational institutes can be treated as a single team.

2. Team Members
   1) Team members shall be 18 years old or above and the students of national colleges of technology, junior colleges, universities, graduate schools, or similar education / training institutes. Individuals who have graduated within seven months prior to the competition date are also eligible.
   2) When participating in both ICV and EV classes in one educational institute, team members and drivers can participate in duplicates.
   3) Drivers participating in the competition shall be 18 years old or above and possess a valid government-issued driver’s license.

3. Faculty Advisors (FA)
   1) During the period of competition, the FA shall be responsible for all team activities even regarding non-competition matters such as safety, health, and the attitudes of team members, and shall also accompany the team throughout the competition.
   2) The FA shall be responsible for all team activities as a representative of each educational institute and shall register for the competition in the same way as the team members.
   3) The FA shall be members of the faculty staff of the educational institute to which the team belongs.
   4) A team may have multiple FAs and it is possible to change FAs until onsite registration.
   5) Teams without FA shall not be allowed to participate. If the FAs are absent during the competition,
the team members shall not be allowed to work in the pit area and participate in events during that period of absence. (excluding cases that FAs stay within the event venue and can be got in touch)

6) During the period of competition, the FA shall accompany the team when using any facility or the like loaned by other educational institute, and application shall be made to the manager of those facilities for approval.

7) If the educational institute join in both ICV and EV Class, the FA who is both for ICV and EV Class is acceptable.

8) Teams which are formed with members from two or more educational institutes must have at least one FA each from every institute.

4. Electrical System Officer (ESO) and Electric System Advisor (ESA) – EV Class Only

1) The ESO must accompany the car whenever operated or is moved around at the event site.

2) It is acceptable for the faculty advisor to be the ESA if all the requirements are met, see the 2017-2018 Formula SAE® Rules, A.5.3.

3) The ESA must have significant experience of the technology that is being developed and its implementation into vehicles or other safety critical systems such that they are adequately qualified to advise the team on their proposed electrical and control system designs.

[NOTE] It may be not necessary for ESA to be educational institute officials. Teams may have more than one person for ESA to achieve this requirement.

(Ref: the 2017-18 Formula SAE® Rules, A5.2 and A5.3)

5. Insurance

All team members and FA (and ESA if on-site – EV Class only) must have an effective insurance to cover injury and medical treatment during the period of the competition. In addition, all participants shall be requested to sign a Written Oath.

[NOTE] It is highly recommended that teams have the insurance covering their activities through a year.

Article 10 Team Participating Application

1. Application: From 10am, Tuesday, January 9, 2018

2. Application Deadline: To 2pm, Friday, January 26, 2018

3. How to Apply

Please apply online via the following website.

https://tech.jsae.or.jp/formula/2018team_en/registration.aspx

4. The Number of Registered Teams: The upper limit is 98 teams at most.

The registered teams are determined by following priorities in order:

First Priority: Top 20 Teams at Overall Score in 2017 and 2016 Student Formula Japan.

Chiba University, Doshisha University, Ibaraki University, Kasetsart University, Kobe University, Kyoto Institute of Technology, Kyoto University, Kyushu Institute of Technology, Liaoning University of Technology EV, Meijo University, Nagoya Institute of Technology, Nagoya University, Nagoya University EV, Nihon Automobile College, Nippon Institute of Technology, Okayama University, Osaka University, Ritsumeikan University, Shibaura Institute of Technology, Shizuoka University, Tokyo City University, Tokyo University of Science, Tokyo University
5. Settling the Registration
The first Pending List and Waiting List will be released on Wednesday, January 31, 2018 on the official website. The deadline for payment of registration fee is at *11:59 pm on Friday, February 9, 2018 on the official website (http://www.jsae.or.jp/formula/en/).

*At the local time of each teams.

[NOTE] The Pending List is the list of teams which may register 2018 Student Formula Japan if they pay the registration fee. The Waiting List is the list of teams which have a possibility of adding to the Pending List.

- After the Application, Teams on the Pending List and Waiting List are screened in the above priority orders. Teams above the 98th are on the Pending List and below 99th are on the Waiting List.
- Teams complete their registration by paying the registration fee only after they are placed on the Pending List.
- Teams must submit their payment certification image to SFJ Office by email: [formula@jsae.or.jp]
- If teams don’t submit their payment certification image by the payment deadline, they are regarded as withdrawals and removed from the Pending List.
- If the number of teams that complete their registration doesn’t reach 98 teams at the time of February 9, some teams on the Waiting List are added to the Pending List in priority orders.
- After Monday, February 19, 2018, the pending list is going to be updated every Monday until the 98th team is added and its deadline for payment of registration fee is *11:59 pm on Friday at the same week.
- Teams on the Waiting List MUST NOT pay the registration fee. The registration fee once paid will never be refunded under any circumstances.

6. Additional Application
If the number of Registered Teams doesn’t reach the upper limit (98 teams), there is a possibility of additional application after January 29, 2018.

7. Registration Fee: There are two class of the registration fee.
1) If all team members (including Faculty Advisors (FA)) are members of one of the following societies: (1) SAE International (2) SAE Australasia (3) SAE Brazil (4) ATA (5) IMechE (6) VDI or (7) JSAE
- ¥108,000 per team (tax included)
Notice: ALL members must be qualified as a member of one of (1)-(7) societies and input their Membership Number at their registration.
2) In all other cases:
- ¥216,000 per team (tax included)
[NOTE] The consumption tax is including. It’s charged to not only domestic participants but also overseas participants in accordance with the law. All bank charges must be paid by each team.

8. Payment: Bank Transfer ONLY as follows

1) Bank Details:
   Bank Name: The Bank of Tokyo-Mitsubishi UFJ, Ichigaya Branch
   (Bank No.: 0005-014)
   Account Holder: Society of Automotive Engineers of Japan, Inc.
   Account No.: 1299678 (Ordinary)
   SWIFT BIC: BOTKJPJT
   SWIFT code: BOTKJPJTXTXX
   Bank Address: 4-8-20 Kudan-minami, Chiyoda-ku, Tokyo, 102-0076 Japan

Article 11 Submission for Documents

The Submission for documents which are for registration and competition events is as follows.

1. Registration Documents

The information for registration documents will be released on team page.

<table>
<thead>
<tr>
<th>Documents to be Submitted</th>
<th>Submission Deadline</th>
<th>Submission Methods &lt;Form/Capacity&gt;</th>
<th>Important Notes (penalties, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Oath</td>
<td>2pm, Fri, August 10</td>
<td>Upload to the Team Page</td>
<td>It doesn’t need if ALL team members are the membership of listed societies SAE International.</td>
</tr>
<tr>
<td>Copies of student IDs with pictures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copies of ordinary motor vehicle driver’s license of all drivers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certificate of Insurance Coverage</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Interview Sheet</td>
<td></td>
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</tr>
</tbody>
</table>


2. Documents of Events

If teams don’t submit the documents as follows, there is a possibility that they shall be prohibited from taking part in each Event or Technical Inspection.

The following delay penalty will be counted on the Overall Score.

<table>
<thead>
<tr>
<th>Documents to be Submitted</th>
<th>Submission Deadline</th>
<th>Submission Methods &lt;Form/Capacity&gt;</th>
<th>Important Notes (penalties, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical System Advisor and Officer Form – EV Class Only –</td>
<td>2pm, Fri, February 23</td>
<td>Upload to the Team Page with ESA/ESO Form for SFJ &lt;Excel/-10MB&gt;</td>
<td>Submission delay will incur a penalty of 10 points a day (Delay Deadline is 2pm, Wed, February 28). Teams can download &lt;the SFJ original template&gt; on team page.</td>
</tr>
<tr>
<td>Notice of Intent For Alternative Frame</td>
<td></td>
<td>Upload to the Team Page &lt;Excel/-10MB&gt;</td>
<td>There is no delay penalty but the unsubmitted team cannot use the Alternative Frame.</td>
</tr>
<tr>
<td>Notice of Intent For Electronic Throttle Control – ICV Class* Using ETC Only–</td>
<td></td>
<td>Upload to the Team Page &lt;doc/-10MB&gt;</td>
<td>There is no delay penalty but the unsubmitted team in ICV Class cannot use the Electronic Throttle Control.</td>
</tr>
</tbody>
</table>
**Article 12  Document Screening**

1. **Document Screening**

   With the Design Reports, Design Spec Sheet, Cost Reports and Business Logic Case submitted from the teams, document screening shall be performed for each Static Event (Design, Cost & Manufacturing and Presentation Event). If teams don’t pass any of the Static documents, there is a possibility that they shall be prohibited from taking part in each Static Event.

2. **Document Screening - Announcement of Results -**

   The results will be announced on Friday, July 27, 2018 on the official website.

**Article 13  Shakedown Certificate**

Teams that have passed the document screening shall submit a **Shakedown Certificate** by 2:00 pm on Friday, August 24 in order to prove the completion level of the car. Teams that fail to submit the Certificate or don’t pass this stage shall not be permitted to participate in Technical Inspections and Dynamic Events.
Shakedown Certificate*
This certificate shall consist of the moving images of the car being driven, accelerated and stopped. The team plate that has the following information is included in the movie.
① Name of the University ② Car Number ③ Place information ④ Date ⑤ Sign of team FA
[NOTE] There is the sample movie on the team page.
*When teams make a movie, they have to use the Driver Equipment and Impact Attenuator and ensure a safe location.

Submission Methods: Upload to the Team Page
Form/Maximum Capacity: mpg, wmv (For Windows Media Player)/ At most 20MB

- EV Class Only -
Teams shall submit moving images of the shutdown button that operates properly. The images shall include the way it operates as “the voltage in the tractive system drops to under 60V DC or 25V AC RMS in less than five seconds after opening the shutdown circuit”

Article 14 Schedule to the 2017 Student Formula Japan

<table>
<thead>
<tr>
<th>Tuesday, January 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning of Participating Application</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Friday, January 26</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deadline for Participating Application</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wednesday, January 31</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notification of the Applicants on the official website.</td>
</tr>
<tr>
<td>Teams on the Pending List may pay the registration fee by the payment deadline.</td>
</tr>
<tr>
<td>After Monday, February 19, 2018, the pending list is going to be updated every Monday until the 98th team is added.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Thursday, February 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning of Submission of Documents on team page</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Friday, February 23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deadline for Notice of Intent for Alternative Frame and Electronic Throttle Control Electrical Systems Advisor(ESA) and Officer(ESO) Form.</td>
</tr>
<tr>
<td>Notice: The EV class teams must submit “Electrical Systems Advisor(ESA) and Officer(ESO) Form”.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Friday, May 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>– EV Class Only –</td>
</tr>
<tr>
<td>Deadline for Submission of Electrical System Form (ESF) and Failure Modes and Effects Analysis (FMEA)</td>
</tr>
<tr>
<td>– ICV Class using ETC Only –</td>
</tr>
<tr>
<td>Deadline for Submission of Electrical System Form (ESF) for ICV Class</td>
</tr>
</tbody>
</table>
Monday, May 21
Deadline for Submission of Structural Equivalency Sheet (SES) and Impact Attenuator Data (IAD)

Tuesday, June 19
Deadline for Submission of Design Report and Design Spec Sheet

Wednesday, June 20
Postmarked Deadline for Submission of Cost Report (Both of the Printed Documents and CD-R)

Wednesday, July 4
Deadline for Submission of Business Logic Case

Friday, July 27
Announcement of Document Screening Result on the official website

Friday, August 10
Deadline for Submission of Documents of Registration

Friday, August 24
Deadline for Submission of Shakedown Certificates

September 4 to 8
2018 Student Formula Japan

Article 15  Follow-Up Program
1. Teams that cannot participate in the Technical Inspections and some of the Static Events may participate in the Follow-Up Program at the competition site.
2. Contents of Follow-Up Program *the details will be on the Team Handbook.
   - Simulated Technical Inspection
   - Design Event
   - Cost Event
   - Presentation Seminar
   - Consultation on EV Production / EV Technical Inspection

Article 16  Process to Dynamic Events
Teams must pass the Technical Inspections to proceed to the Dynamic Events.

Article 17  Awards
Outstanding Performance Awards, Categorized Awards and Special Awards.
*Referring to the sheet “2018 Student Formula Japan Awards List (provisional)”
Article 18  Additional Clause

1. 2018 SFJ Local Rules will be announced on the official website at any time.
2. On participating in the 2018 Student Formula Japan, each team and the members shall thoroughly read and comprehend the contents of the 2017-2018 Formula SAE® Rules, 2018 SFJ Local Rules and 2018 SFJ Participation Rules.
3. When any doubt occurs as to the interpretation of the Rules, the decision of Rule Committee and Execution Committee has priority over all others.
4. In case you abandon to join in 2018 Student Formula Japan even though the documents screening is qualified, please declare to do so (2017-2018 Formula SAE® Rules, A.7.8) with the least delay.
5. Teams must comply with Japanese laws.
### Outstanding Performance Awards

<table>
<thead>
<tr>
<th>Award Name</th>
<th>Outline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minister of Economy, Trade and Industry Award</td>
<td>Top finisher overall (Team accomplished all events)</td>
</tr>
<tr>
<td>Minister of Land, Infrastructure, Transport and Tourism Award</td>
<td>Top team overall rating in safety, environmentally friendly and advanced technology</td>
</tr>
<tr>
<td>Governor of Shizuoka Prefecture Award</td>
<td>Top team overall rating in Static Events, Acceleration, Skid-pad, Autocross, Noise, Efficiency, Safety, and Weight Reduction</td>
</tr>
<tr>
<td>Mayor of Kakegawa City Award</td>
<td>Top team overall rating in Dynamic Events</td>
</tr>
<tr>
<td>Mayor of Fukuroi City Award</td>
<td>Top team overall rating in Static Events</td>
</tr>
<tr>
<td>JAMA Chairman Awards</td>
<td>Teams accomplished all Static &amp; Dynamic Events (exc.penalized by Noise or document submission delay)</td>
</tr>
<tr>
<td>JAPIA Chairman Awards</td>
<td>Top team overall rating in Cost &amp; Manufacturing, Presentation, and Weight Reduction in all teams which accomplished Endurance</td>
</tr>
<tr>
<td>Spirit of Excellence Awards for ICV class</td>
<td>Top finisher overall in ICV (Team accomplished all events)</td>
</tr>
<tr>
<td>Spirit of Excellence Award for EV class</td>
<td>Top finisher overall in EV (Team accomplished all events)</td>
</tr>
</tbody>
</table>

### Categorized Awards

<table>
<thead>
<tr>
<th>Award Name</th>
<th>Outline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Awards</td>
<td>Top 3 teams in Cost &amp; Manufacturing</td>
</tr>
<tr>
<td>Design Awards</td>
<td>Top 3 teams in Design</td>
</tr>
<tr>
<td>Presentation Awards</td>
<td>Top 3 teams in Presentation</td>
</tr>
<tr>
<td>Acceleration Awards</td>
<td>Top 3 teams in Acceleration</td>
</tr>
<tr>
<td>Skid-Pad Awards</td>
<td>Top 3 teams in Skid-pad</td>
</tr>
<tr>
<td>Autocross Awards</td>
<td>Top 3 teams in Autocross</td>
</tr>
<tr>
<td>Endurance Awards</td>
<td>Top 3 teams in Endurance</td>
</tr>
<tr>
<td>Efficiency Awards</td>
<td>Top 3 teams in Efficiency</td>
</tr>
</tbody>
</table>

### Special Awards

<table>
<thead>
<tr>
<th>Award Name</th>
<th>Outline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rookie Awards</td>
<td>Top teams from the SFJ first-timers</td>
</tr>
<tr>
<td>CAE Awards</td>
<td>Top teams in terms of CAE in Design Event</td>
</tr>
<tr>
<td>Lightweight Engineering Awards(ICV)</td>
<td>The lightest vehicle attended whole events (exc.Endurance)</td>
</tr>
<tr>
<td>Lightweight Engineering Awards(EV)</td>
<td></td>
</tr>
<tr>
<td>Best Suspension Awards</td>
<td>Top teams in terms of suspension performance in Design Event</td>
</tr>
<tr>
<td>Best Improvement Awards</td>
<td>The most improving teams participated for the second consecutive year</td>
</tr>
<tr>
<td>Best Three–View Drawing Award</td>
<td>Top team on Three–View Drawing</td>
</tr>
<tr>
<td>Best Aerodynamics Award</td>
<td>Top team on Aerodynamics and Thermo–fluid analysis</td>
</tr>
<tr>
<td>Best Lap Awards</td>
<td>Top three teams recorded the fastest lap in Endurance</td>
</tr>
<tr>
<td>Best Composite Award</td>
<td>Top team made high–quality composite parts</td>
</tr>
<tr>
<td>Best Electrical System Design Awards</td>
<td>Top 3 teams in terms of electrical system design (Only for EV team that complete Design Event)</td>
</tr>
<tr>
<td>Ergonomics Awards</td>
<td>Top 3 teams who achieve superior ergonomic design as a racing car.(Driving position, steering/pedal maneuverability, instruments visibility, etc)</td>
</tr>
</tbody>
</table>